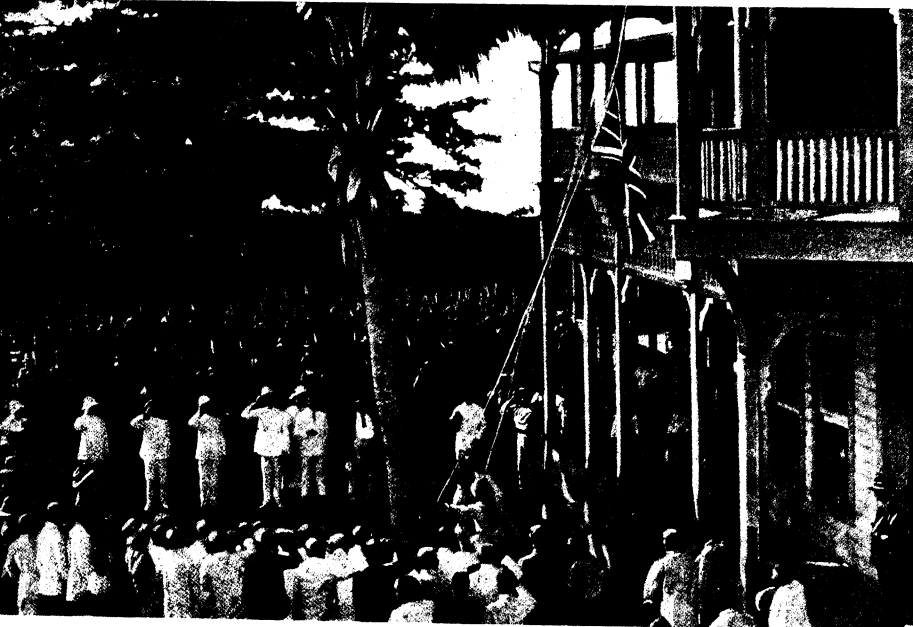


AUSTRALIA CELEBRATES THE JUBILEE OF KING GEORGE V.
A vast crowd in the Centennial Park, Sydney, New South Wales, watched His Excellency take the Salute.



1914—1918

1. Australian Artillery previous to the First World War
2. Darwin, Capital of Northern Territory before destruction by Japanese Air Raid.
3. Hoisting the Flag over Kaiser Wilhelm's Land (New Guinea)

AUSTRALIAN PANORAMA

Land of Golden Opportunity

By

CHARLES W. DOMVILLE-FIFE

Editor-in-Chief of the
"Encyclopedia of the British Empire."
Editor of "The Seagoer."



With 193 illustrations and maps



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THE ENCYCLOPEDIA OF THE BRITISH EMPIRE SERIES

Opposite—Sydney from the Docks. View from the air.



THE OLD GOVERNMENT HOUSE, RABAUL

Capital of the New Britain Archipelago (Ex-Bismarck Archipelago)

Photo—Australian Government.

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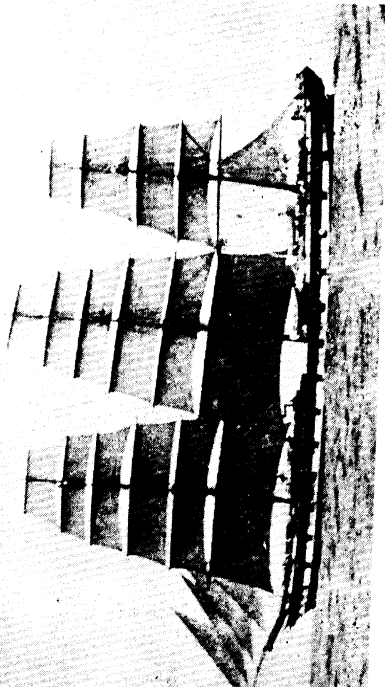
SUBMARINES OF THE WORLD'S NAVIES.
SUBMARINES AND SEA POWER.
THE SUBMARINE IN THE GREAT WAR.
ANTI-SUBMARINE WARFARE.
SUBMARINE, MINE AND TORPEDO.
SUBMARINE ENGINEERING OF TO-DAY.
EVOLUTION OF SEA POWER.

BIOGRAPHICAL

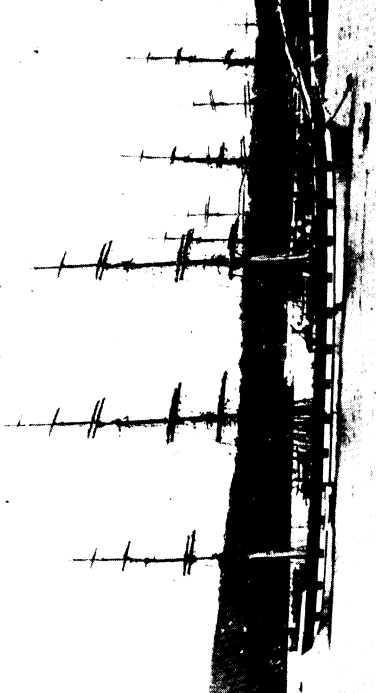
KING GEORGE V AND QUEEN MARY.
EDWARD VIII, THE UNCROWNED KING.
KING GEORGE VI AND HIS EMPIRE.
SQUARE RIGGER DAYS.
I TELL OF THE SEVEN SEAS.

NOVELS AND PLAYS

THE WAY OF THE STRONG.
THE QUALITY OF MERCY.
ETC., ETC.



Above : THERMOPHYLAE in the 'Sixties
Below : The clipper HARBINGER in which Frank T. Bullen served as Second Mate



AUSTRALIAN CLIPPERS OF YESTERDAY

Above : LOCH TORRIDON
Below : Wool clipper at Sydney, N.S.W. 1880
SAILING SHIPS LIKE THESE FOUNDED AUSTRALIA

PREFACE

It is the object of this book to present as clear a picture as possible of a great British nation in the making. One that has passed from childhood to maturity within the span of the two generations living to-day. The growth of which has been so phenomenal that public understanding, throughout the world, of its accomplishments and progress has lagged so far behind the actual achievement as to have become a just cause of reproach that in this age of intensive publicity regarding everything foreign, there have been so few recent portraits of this Empire Nation in the flush of its recent triumph, victory under arms, achievement in industry, and, perhaps the greatest of all, the promise of a future in this sunny land of the broad horizon to a whole British race. A Continent preserved for white people, within a world-wide Empire, awaiting full development by the magic touch of population.

Australia is both a country and a nation that the whole world *needs*. Firstly, to supply food for over-peopled Europe; and nowhere are there more available acres—notwithstanding those dim, menacing spectres erosion and lack of water—than in this vast south land, unhampered now by international antagonisms, versed in the cultivation of the land, and breeder of a healthy outdoor race of British stock. Secondly, to redress the balance between supply and demand for certain of the products of the West by the inarticulate but clamouring millions of the near-by East. Irrevocably awakened by the wars of the white peoples devastated



1. ON THE CATTLE PLAINS OF QUEENSLAND
2. ROMA, A RANCHING CENTRE IN THE FAR WEST OF QUEENSLAND

and robbed of the treasures of old, starved for a decade of the utilities of the modern world, Asia awaits, with eight hundred million pairs of outstretched hands.

The present is a moment in the tide of the affairs of this nation, which, if taken at the flood, will lead to a future so brilliant that it can now be distinctly seen in the mist of things to come. Never before have well over a hundred thousand of the more virile of the British people been eagerly awaiting transport to carry them to work on the land and in the factories, to found new homes within its continent-wide and sea-girt shores, encompassing almost every known climate, interest, occupation and way of life, each marked clearly—"Here, there is work—*and* opportunity!"

Little more than sixty flying hours distant from London, New York, and all the thickly populated countries of Europe, there can be little doubt that on Australia will be focussed in the very near future the attention of all the white peoples of the world.

LONDON.

CHARLES W. DOMVILLE-FIFE.



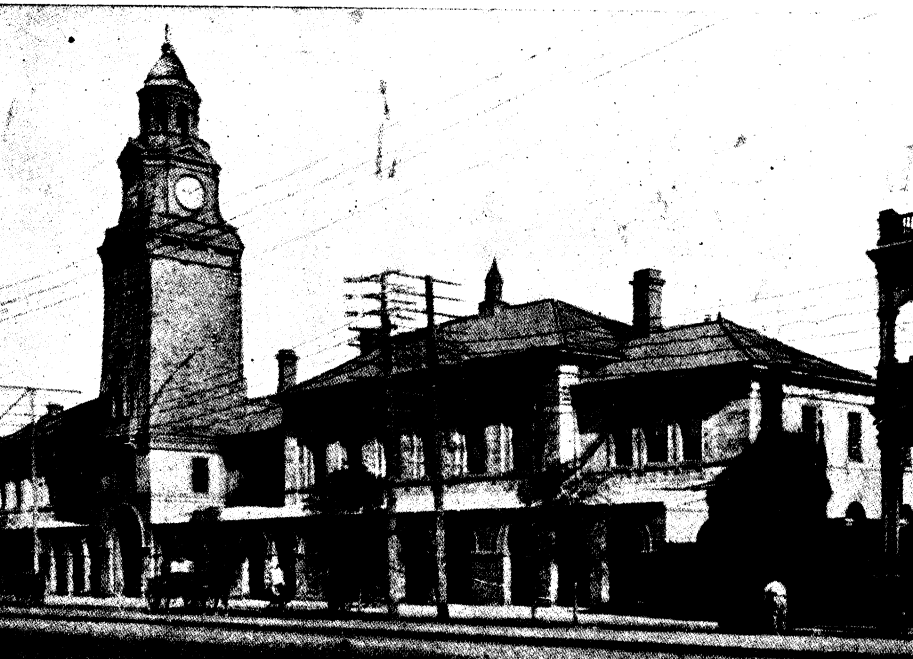
1. CROSSING A WESTERN AUSTRALIAN DESERT
2. CAMEL TRANSPORT IN THE "NEVER-NEVER" LAND
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ACKNOWLEDGMENTS

No true picture of a country and its people, past and present—a great nation in the making—can be presented in words, illustrations and maps without the aid of a small army of willing helpers. Certainly no comprehensive view of life in the Australia of to-day could be obtained without the generous hospitality for which Australians are justly famed. It seems a little ungenerous not to repay unstinted help of all kinds with just a few words of public acknowledgment, but there is the difficulty of *who* to include and *whether they would wish to be included* in such a list, even if the necessary pages were devoted to it. Yet without their co-operation this book could never have been written and illustrated. For enabling me to keep up-to-date and for the supply of many fine illustrations I must at least offer my sincere thanks to those officials of the Australian News and Information Bureau who have been unflinching in the work of checking statistics, reading proofs and filling gaps in the photographic record. My thanks are also due to the Agents-General of the Governments of New South Wales, Queensland, South Australia and Western Australia, and to Sir Claude James, the Agent-General for Tasmania, who have helped with the loan of illustrations and in the supply of those items of last minute information necessary to complete this Australian Panorama.—C.W.D-F.



CATTLE ROPING AND THROWING, WESTERN AUSTRALIA

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MONALTA GORGE. NEAR ADELAIDE

Photo—Australian Government





Above: ABORIGINAL SETTLEMENT, YARRABAH, AUSTRALIA

Below: A TURTLE'S NEST
Natives of Northern Territory uncovering turtle's eggs in the soft warm sand of the nest







A FOREST OF WHITE STRINGYBARK

Chapter I

LOOKING AT SYDNEY AND SEEING AUSTRALIA

I MET Australia coming through Sydney Heads. They were young and bronzed, with every movement eloquent of this great land of the out-of-doors. Their little sailing boat danced by on the sparkling waves far below the liner's lofty deck, from which a few minutes later the scene changed to the magnificent sweep of Port Jackson, with its two hundred miles of harbour frontage, its rocky shores with numberless little bays and inlets, and the skyline of Sydney.

From this peerless ocean gateway, which vies with Rio de Janeiro and Hong-Kong for the laurel wreath of majesty, long lines of narrow streets faced by large stone buildings, all clear-cut and gleaming beneath the high, blue Australian sky, lead away into the busy maze of what, in point of size, is the seventeenth city of the world. It has been built by a nation in the first flush of its youth, by seven and a half million people who have a continent-island to themselves—one as large as the whole of Europe—but who elect to congregate to the extent of one-seventh of their total number in this great metropolis of New South Wales. A handicap to the whole of Australia, maybe, but what a tribute to Governor Phillip, who established the original little settlement one hundred and sixty years ago!

No sooner had I emerged from among the warehouses, factories and mean streets of old Sydney, and was bowling along between the brown sandstone buildings of the commercial centre, than I realised why Robert Louis Stevenson said, "I love Sydney." Every city known

Opposite—Circular Quay, Sydney.



**Above : LOADING WOOL FROM THE STORES, MILLERS POINT, SYDNEY,
NEW SOUTH WALES**

Below: WHEAT AWAITING SHIPMENT AT FREMANTLE, WESTERN AUSTRALIA



to me possesses its own atmosphere, often made up of climatic peculiarities as well as architectural trifles. London, for example, would not be herself without the light grey haze which blends so well with its old stone. Sydney's lofty sky of blue and its sense of open space and freedom is as much a part of the city as commercially-inclined George Street and Martin Place, the ferry-boats of Circular Quay and the beaches of Manly, Bondi, Coogee, Moroubra and Harbord, where one surfs in "the long wash of Australasian seas."

Sydney, the capital of New South Wales, is one of the finest cities on the continent, and occupies the site of the original settlement established by Governor Phillip in 1789. British cities all the world over are much alike, and Sydney is no exception to the rule. It is the second white city of the Empire, having a population of about 1,480,000. Only London gives a bigger count of heads if the Indian centres of Calcutta, with 1,500,000 people, and Bombay, with 1,400,000 are left out of the reckoning. It possesses magnificent parks, squares, hotels, clubs, public buildings and shops, which display in profusion all the latest feminine lingerie and creations of the world of art, science and industry. It has been termed by many the "Queen City of the South."

The harbour, known as Port Jackson, is the finest natural anchorage on the coast of New South Wales, and could accommodate the combined fleets of the world. It was this well-sheltered bay which induced Governor Phillip to establish the first settlement on its shores; and Sydney owes its present prosperity not only to the fertility of the surrounding country, and the extensive system of railway lines which link this city to the great commercial centres of Victoria and Queensland, but more than anything else to the square miles of placid water composing the harbour of Port Jackson.

Sydney is the fifth port of the British Empire and the commercial centre of the South Pacific; and I am one of those who believe strongly in its continued prosperity when Australia has awakened to the need of keeping her people on the land by more modern methods for social



intercourse and amusement than have been adopted in the past. This city is not only the largest but it is also the oldest in Australia. Every now and again one obtains glimpses strangely reminiscent of Victorian and even Georgian London. The next moment New York, with its long regular avenues and streets of lofty, large-windowed, square stone buildings, seems to come into the picture. Even the palm-fringed boulevards of Los Angeles appear in Macquarie Street, which faces the beautiful Botanical Gardens.

Sydney is not a skyscraper city. Its buildings are, happily, restricted by law to a maximum height of one hundred and fifty feet. It is the leading port in the whole of Australia. The entrance to its twenty-one square miles of water and dock is nearly a mile wide and nowhere less than eighty feet deep. Inside there are two channels with not less than forty feet of water at low tide. The largest vessels in the world can enter this magnificent port. During the Second World War the R.M.S. *Queen Mary* and R.M.S. *Queen Elizabeth* were frequent visitors. At least four of these mammoth ships could be comfortably accommodated simultaneously. There are fourteen miles of wharfage and the sheds cover seventy-three acres.

During the war and post-war years the whole character of the port of Sydney changed. In addition to being the leading commercial harbour in Australia, it became an important naval and military base for Allied operations in the Pacific and a major repair base for shipping of all kinds. At times, as many as one hundred and ninety-four vessels, including warships, were being catered for simultaneously in this great Pacific port. The total cargo handled averages about two and a half million tons a year. The terminal elevator has a storage capacity for bulk wheat of seven and a half million bushels.

In addition to the suburban electric railway system and the underground—the only one in Australia—the Sydney metropolitan area is served by a network of electric tramways, trolley-bus and omnibus services,



catering for five hundred to six hundred million passengers a year and operating over five to seven hundred miles of route. The maximum permissible taxi-cab fare is "one shilling flag fall" and then ninepence a mile.

While statistics convey relatively little to the average mind, all this goes to show that Sydney is not only a great city but also a most up-to-date and progressive one. There is something in its throbbing activity which seems to give it an ever-present holiday atmosphere.

Although this is not a guide book, the opportunity presents itself to say something here about air communications in Australia. Sydney has become an international airport, the hub of all principal airports for Australian or overseas travel. There are regular daily air transport services between Sydney and the capital cities of other States—Melbourne, Brisbane, Hobart, Launceston, Adelaide and Perth—as well as between Sydney and Canberra, the Federal capital. Many country centres are now linked by air with Sydney. Aircraft leave six days a week for London via Bowen, Darwin, Sourabaya, Singapore, Rangoon, Calcutta, Karachi, Bahrein, Basra, Cairo, Augusta, Marseilles, Poole (in the case of flying boats) and Darwin, Singapore, Karachi, Cairo and London (in the case of land, mail planes). Regular services also run to New Guinea, Port Moresby, and Lae, and to Darwin. The service to New Zealand (Auckland) is daily and passages may be booked to Canada (Vancouver), and America (San Francisco). The principal airlines are: Trans-Australian Airlines, Butler Air Transport, Australian National Airways, Qantas Empire Airways, Ansett Airways, Tasman Empire Airways and British Commonwealth Pacific Airlines. All air services are subject to the strictest supervision. Airplanes are always available in Sydney for short pleasure trips or private charter for long journeys.

Reinforced concrete, stone and asphalt may spell romance for the engineer and architect, but certainly not for the average human being; and to estimate a city's attractions by its miles of streets is, in my judgment, a confession of failure to appreciate that the true purpose



of work is to make of life something better than it would be without it. It is out in the back-blocks, the national parks, on the beaches and among the joyous crowds that one can study the psychology of a people quite as much as in the commercial and financial centres. A city which is surrounded by few pleasure resorts, sporting facilities, artistic coteries, educational establishments, and patriotic military rendezvous, has failed in the purpose for which it was created; and Sydney certainly cannot be said to have done this. With the enthusiasm of youth she has more often erred in the opposite direction.

What a romance there is in the childhood of this city. While walking among its modernities I could not help thinking of the appearance of the very earth, which now lies for the most part buried beneath the mountains of dressed stone, when Captain Cook sailed into Botany Bay less than four generations ago. In the upper reaches of the harbour, still surrounded with virgin bush, in the forest reserves of Kuring-gai Chase and the National Park, lying about twenty miles to the north and south of the city, one can even now obtain an idea of the original appearance of the site upon which Sydney stands.

"Here Nature is still free; the forests stand untouched by the axe, the enchanting fern-clad dells in the hollow of the hills are yet unspoiled. In the spring-time, colour laughs in its triumph. The whole district is a mass of flowers. From the trees the starry clematis and other climbers hang in festoons, while in the gulleys the brilliant sunshine breaks through the vivid green of tree ferns and myrtle, streaking the waters with gold," writes an Australian.

Sydney's Zoo at Taronga Park is one of the finest in the world. It is set delightfully on a steep part of the harbour foreshore, with picturesque gardens and lawns, pleasant picnic grounds and natural bushlands. A fine and highly representative collection of both native and imported animals and birds live in surroundings as near as practicable to their natural haunts. The inhabitants range from elephants and polar bears to specimens of



Above : Typical modern villas, in the district of Caulfield, suburb of Melbourne, Victoria

Below : Cookery Class, Swinbourne Technical College, Melbourne.



platypus, koala bears and deadly snakes—from birds of paradise and great American and Australian eagles to gay parrots and lovely bower birds. Lions and tigers and monkeys breed freely under ideal conditions. There is an aquarium where weird and gorgeously coloured tropical fish swim in specially illuminated tanks and where baby penguins and fierce Australian man-eating sharks may be inspected at close quarters. A floral clock, a masterpiece of the gardener's art, is also to be seen, and for the further amusement of children there is a unique circus, where all the stars are animals.

There can be no doubt, however, as to the most popular exhibit. The attractive, harmless and friendly little creature, known as the Koala, or "teddy bear," has become an object of world interest. The growing scarcity in New South Wales of this animal, notwithstanding that it is protected by law, has led to special efforts being made to prevent its extinction. Experience has shown that it will not live under ordinary captive conditions.

An hour's drive by electric car brought me one afternoon to Botany Bay, and I realised by what a narrow margin of both time and enterprise it was that Australia became a British Empire State instead of a French Colony. At La Perouse, on the north shore, the famous French navigator of that name reached this historic bay only a few days after Captain Phillip had hoisted the British flag. Then I crossed this wonderful arm of the sea to Kurnell, and stood in the sunshine by the monument which marks the landing place of the intrepid Yorkshireman who reached Australia in 1770. In his private log Captain Cook gives the following account of his movements and impressions on this and the succeeding day, which marked the birth of white Australia :

Sunday, April 29th, 1770.

Gentle breezes and settled weather. At 3 p.m. anchor'd in 7 fathom water in a place which I called Sting-Ray Harbour. The south point bore S.E. and the north point east, distant from the south shore one



MARRICKVILLE, AN INDUSTRIAL SUBURB OF SYDNEY, NEW SOUTH WALES

Photo—Australian Government

This aerial view shows the great Woollen Mills

mile. We saw several of the natives on both sides of the harbour, as we came in, and a few hutts, women and children on the north shore, opposite to the place where we anchor'd and, where I soon after landed with a party of men, accompanied by Mr. Banks, Dr. Solander and Tupia. As we approached the shore the natives all made off, except two men, who at first seemed resolved to oppose our landing. We endeavour'd to gain their consent to land by throwing them some nails, beads, etc., ashore, but this had not the desir'd effect ; for, as (we) put into the shore, one of them threw a large stone at us, but on the firing of two or three musquets with small shott, they took to the woods, and we saw them no more. We found here a few poor hutts, made of the bark of trees, in one of which were hid four or five children, with whom we left some strings of beads, etc. After searching for fresh water without success, except a little in a small hole dug in the sand, we embarqued and went over to the north point of the bay, where, in coming in we saw several of the natives, but when we now landed we saw nobody ; but we found here some fresh water, which came trickling down and stood in pools among the rocks ; but as this was troublesome to get at, I sent a party of men ashore in the morning, abreast of the ship, to dig holes in the sand, by which means we found fresh water sufficient to water the ship. After breakfast I sent some empty casks ashore to fill, and a party of men to cut wood, and went myself in the pinnance to sound and explore the Bay, in the doing of which I saw several of the natives who fled at my approach.

Tuesday, May 1st.

Last night departed this life Forby Sutherland, seaman, who died of consumption, and in the A.M. his body was entard ashore at the watering place. This circumstance occasioned my calling the south point of this Bay "Sutherland's Point."

In the *Evening Post* of July 20th, 1771, a leading London newspaper of that time, the discovery of Australia is recorded in the supercilious language of the

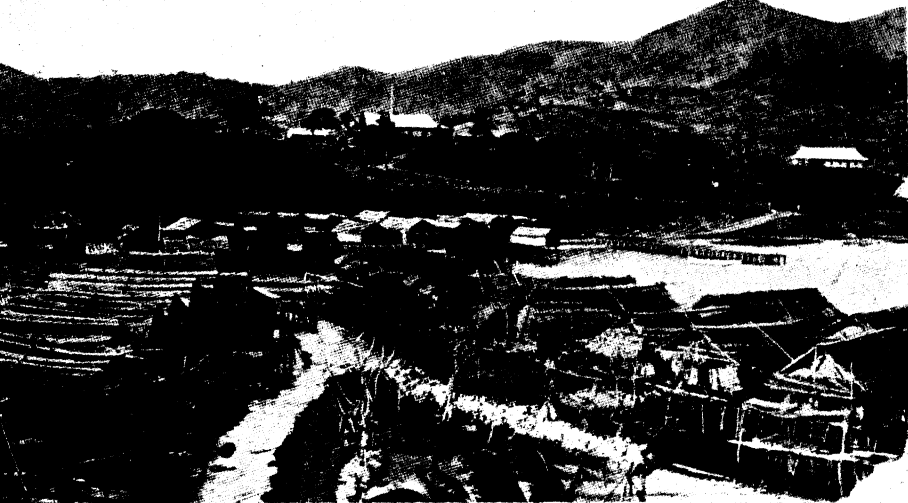


period : “ We learn by the *Endeavour*, from the South Sea, that they discovered a Southern Continent in the latitude of the Dutch Spice Islands ; that the people were hospitable. It is very extraordinary that they have no kind of worship or religion amongst them. Two of the natives came voluntarily with Mr. Banks, but both died later at Batavia. From this voyage we expect many discoveries and much entertainment. They had an excellent observation of the transit of Venus, but the ingenious Mr. Green died upon his return. Upon their arrival, the Admiralty seized all the officers’ papers. In consequence of this discovery, more ships will be destined in search of this new terrestrial acquisition.”

The interest of all that is to be seen, enjoyed and understood as one passes through such a land of variety will be enhanced by a moment’s pause on its threshold to make sure that the answer is known to the important question—what is Australia ? From the moment of setting foot on its soil this bewilderingly large and new world seems by its sunny and attractive out-of-door life to defy every attempt to settle down to its capture on paper in geographical, economic and historic form.

From north to south the Australian continent extends for nearly two thousand miles, while its greatest breadth from east to west is about 2,400 miles. The coastline of the Commonwealth, exclusive of minor indentations, measures 12,210 miles. It is a fertile and healthy country, 2,974,581 square miles in extent, or twenty-five times the size of the United Kingdom, inhabited by a population of between seven and a half and eight millions. It is surrounded by the Pacific and Indian Oceans, and already possesses its own colonies, northwards in tropical New Guinea and the Pacific Islands, and southwards in the Antarctic. The native population of the island dependencies is considerably over two hundred thousand.

The Australian continent contains nearly every description of soil and every variety of climate, from temperate to sub-tropical. Of the total area of the country



EARLY DAYS IN PAPUA

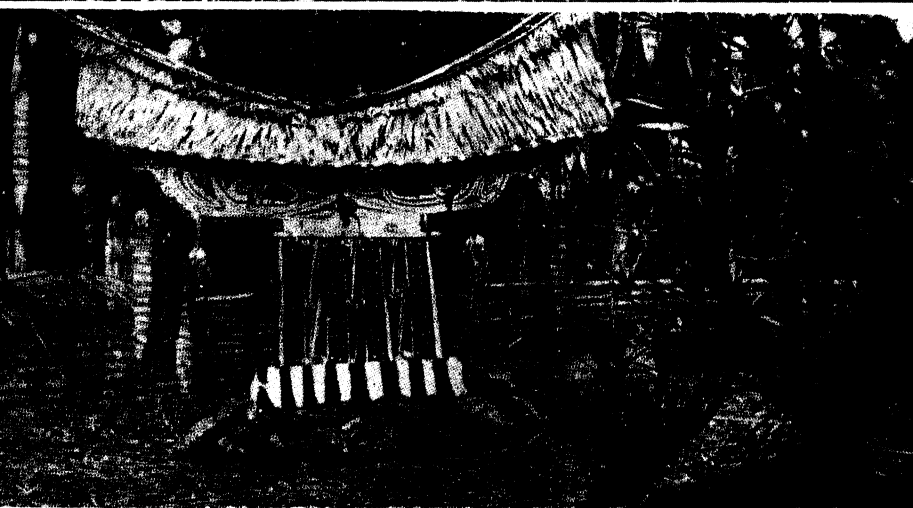
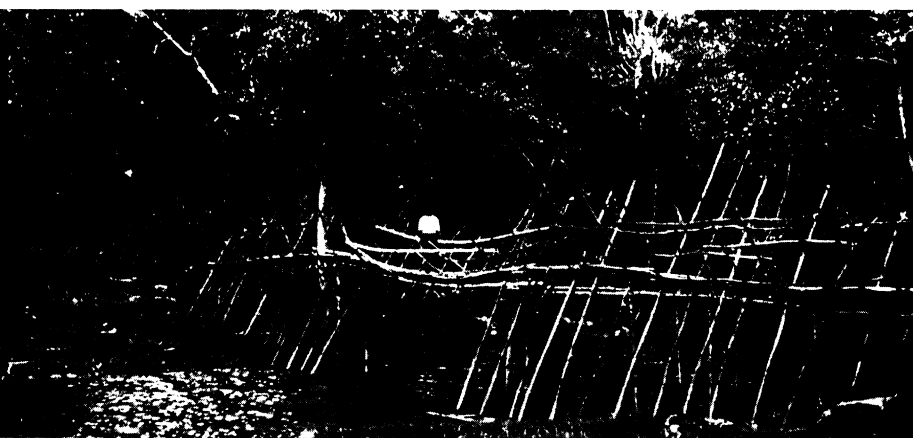
1. ELEVERA, A NATIVE VILLAGE BUILT ON BAMBOO PILES, NEAR PORT MORESBY
2. CANNIBALS, CHIEF OF PAPUA



Above : ELIZABETH STREET, SYDNEY

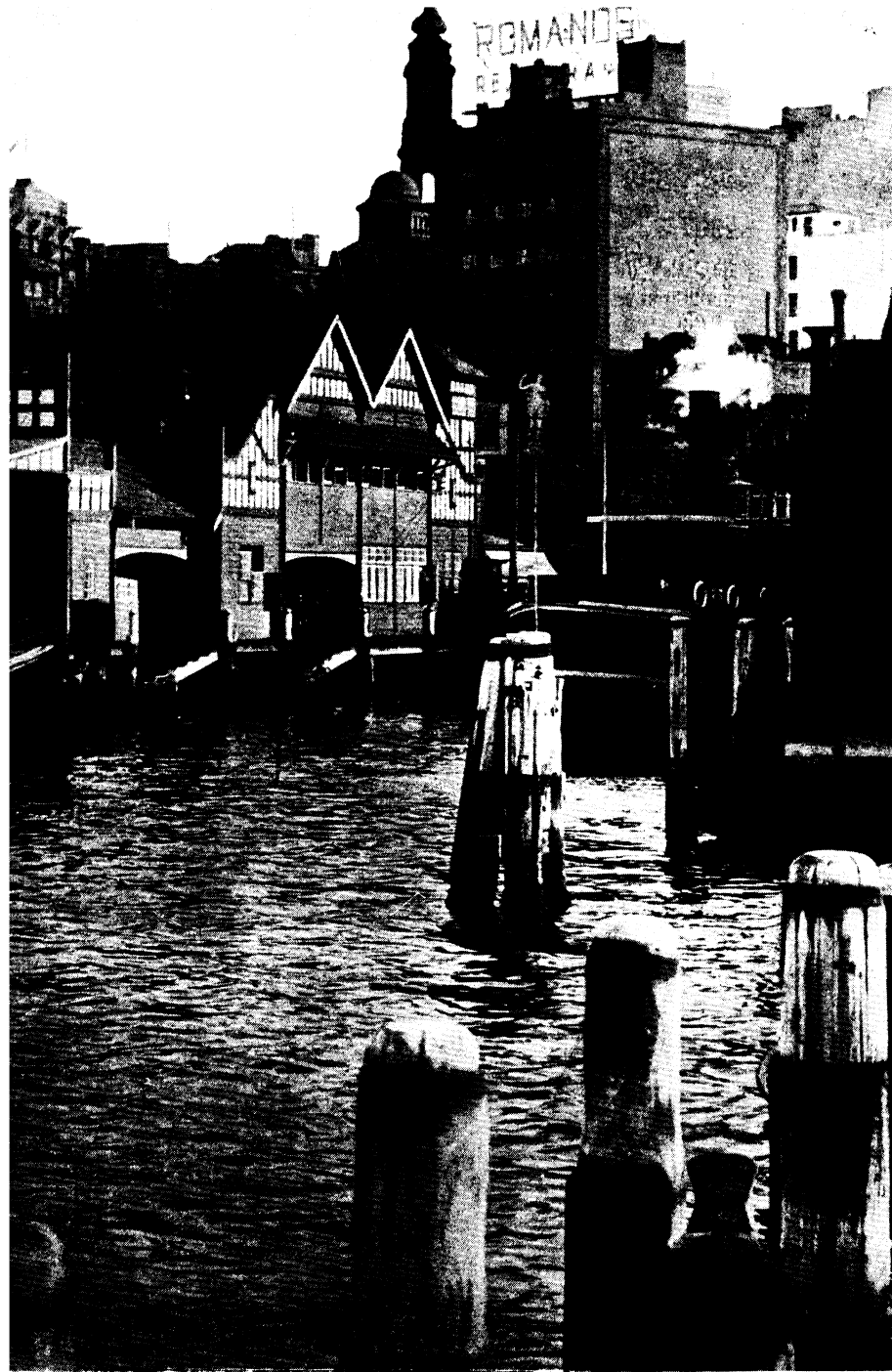
Below : MACQUARIE STREET, SYDNEY





DAWN OF CIVILISATION IN PAPUA

1. CANNIBAL CHIEF PRESENTED WITH HIS FIRST SHIRT
2. A NATIVE BRIDGE OVER THE FLY RIVER
3. GRAVE OF A NATIVE CHIEF MAEWAR, MINTOBY, PAPUA

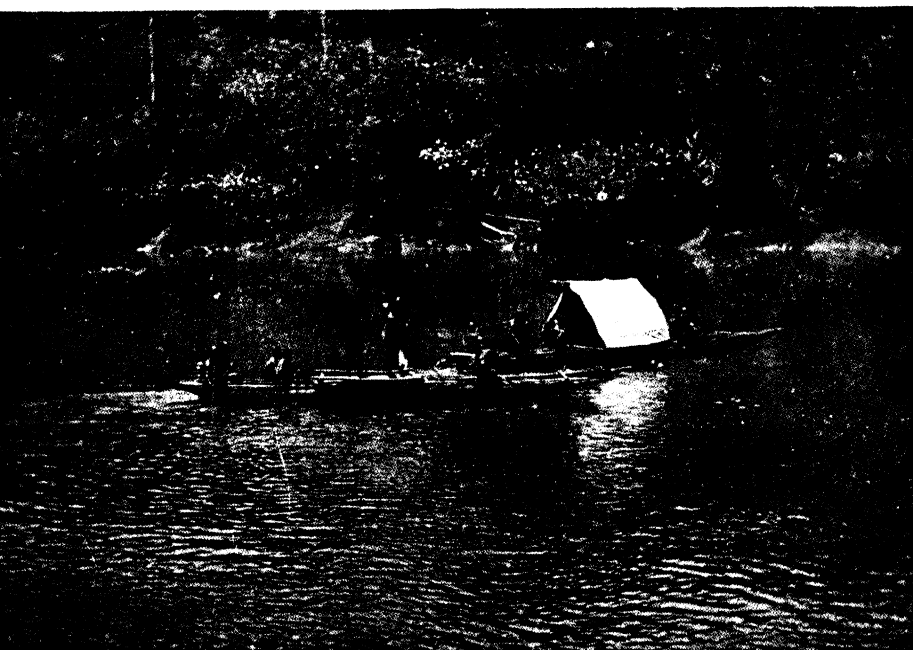


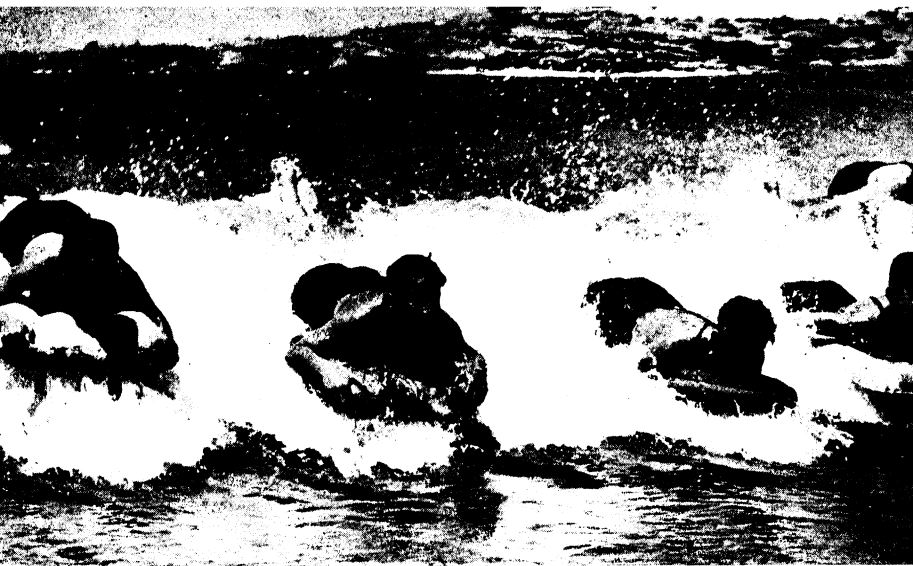
SYDNEY, NEW SOUTH WALES



Above: NATIVE WOMAN BEGGING TOBACCO FROM A PATROL ON THE
FRONTIER OF DUTCH NEW GUINEA

Below : NATIVE CRAFT ON A PAPUAN RIVER



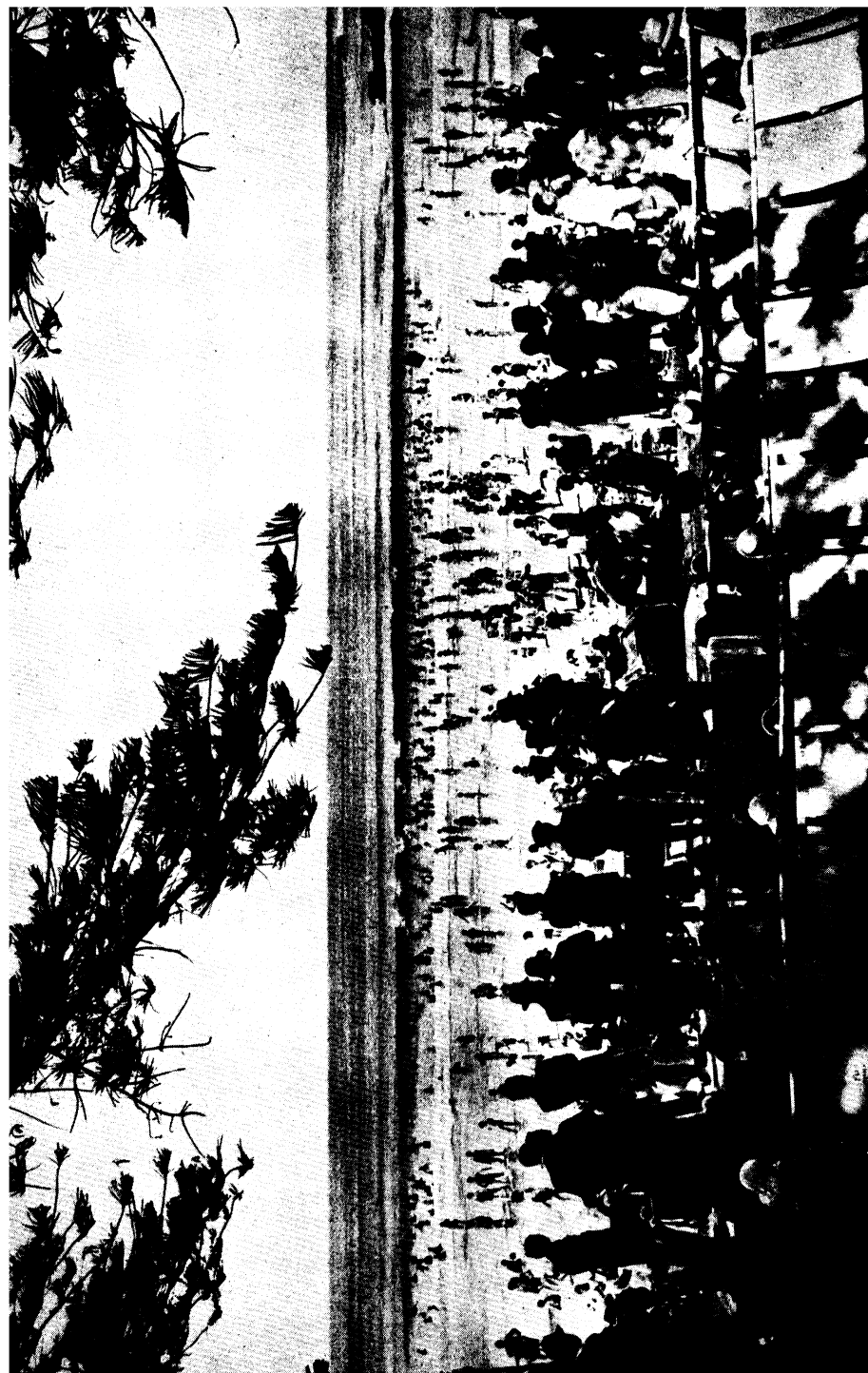


SURFING AT MANLY BEACH

A SYDNEY SURF CARNIVAL

The Volunteer Life Saving Brigade on Manly Beach, Sydney, New South Wales
Photo—Australian Government.





the lesser portion (1,149,320 square miles) lies within the tropics. The States of the Commonwealth having portions of their territory in the tropical zone are: Queensland, 359,000 square miles within the tropics and 311,500 square miles in the temperate zone ; Western Australia, 364,000 square miles and 611,920 square miles ; the Northern Territory 426,320 square miles and 97,300 square miles. The States of New South Wales, Victoria, South Australia and Tasmania are all within the temperate zone. Exactly what these states offer climatically and otherwise will be seen in later pages. Here it is sufficient to say that the Australians have determinedly refused imported coloured labour, even for work in the tropical regions, except in the pearl fishery, reserving the whole continent for the habitation of white men.

Australia has forty large cities and has nearly finished the construction of what should prove eventually to be one of the most magnificent capitals in the world. This is Canberra, a Federal Territory, carved out of the State of New South Wales, which has a growing population of over fifteen thousand. Within the Commonwealth there are mines of gold, silver, coal, iron and tin as well as of precious stones ; and it has been estimated that there are between seven hundred and eight hundred millions of acres of unsold state land. It should, however, be said that there are also very large tracts of waterless desert where the camel is used as a means of transport. Although details of topography, climate and agriculture, are matters of importance to the would-be settler and will be dealt with in later pages, mention should be made here that Australia has many wide and beautiful rivers and at least one mountain range on which winter sports are annually enjoyed by large numbers of people.

Although the distances are great in this sparsely populated island-continent there is a fairly extensive network of railways connecting all the principal towns; and airways cross the continent in most directions. All the Australian State capitals are situated on or within easy distance of the sea ; the climate of the whole continent

is conducive to a life in the open air for the greater part of the year ; the majority of the population, both in town and country, live within fifty miles of the ocean ; its very spaciousness necessitates the use of the motor-car by people who, in cities and countries built on a smaller scale, might consider them an extravagance, and it is these essentials of Australian topography and life which have caused swimming, surfing, yachting and other aquatic sports to become national pastimes.

In Sydney I watched hundreds of cars, buses and boats conveying people, many already in bathing costume, to the ocean beaches directly business had ceased for the day and also during the week-ends of complete freedom. Then I went to Manly, Coogee and Bondi and discovered the lure of the sun and surf. Anyone can work in a city on a dull, rainy day, but it is not quite so easy for young men, women and children to content themselves indoors when the blue sea rolls in sparkling foam on to an Australian shore of velvet sand.

Taking the crowded ferry boat from the Circular Quay, I crossed the calm waters of the great harbour. On a moonlight summer evening this arm of the sea forms an unforgettable sight with the city's lights a blazing semicircle and the ferries streaking the silver sheet with yellow pinpoints of moving flame. "Come with me to Manly" is an invitation that one hears shouted in streets and offices all over Sydney and its many suburbs ; and here we all were on a Saturday afternoon in January on the way to this favourite beach. And what a beach it is ! Hundreds of yards of sand in a half-circle, wide as the sweep of one's arm ; green pine-trees with promenades and cheerful looking houses and shops for a background ; multitudes, joyous as young Australia can be, for its hive-like human interests ; sunlight, and a breeze which comes across thousands of miles of ocean ; and, facing all, that for which Manly exists—tumbling lines of effervescing surf rolling shorewards from the sapphire wastes.

For an hour or so I was content to walk around looking at the colourful and animated scene of Sydney

at play. Thousands of people were sitting on the sands, and the sea was black with heads and moving arms. Among the pines fringing the promenade other thousands were reclining in deck chairs listening to the band. Bright-hued umbrellas added spots of colour to the yellow shore. Behind the sea front there was the Esplanade, with its hotels, boarding-houses, and the gay little street—called the Corso—of shops, cinemas and sideshows, leading to Sydney Harbour.

The spirit of carnival was in the air, and sun and sea were gods being worshipped by thousands with an abandon unknown on the more sober beaches of Europe and America. Beyond this *joie de vivre* I saw little during my first day in Manly that was different from similar scenes elsewhere round the shores of the seven seas. On the following morning, however, I sought and found the Surf Club, and there learned of the work of the Life-Savers, who are for ever on watch from the summit of a lofty tower to detect people who may be in difficulties in the heavy seas rolling in from the Pacific.

Then came a day when I discovered in a most dramatic way that the seas which wash the beaches are tropical waters. Thousands of people were struggling out against the succeeding lines of surf and throwing themselves on the crests of the big waves, to be carried shorewards with the wash. It was a joyous scene until the deep tones of a bell rang out over the hissing waters.

A thrill of horror passed through the thousands on the beach. Eyes were everywhere strained seawards to the space of water between the red flags, which denoted the area considered safe for bathing and surfing. Almost as soon as the sharp peals of the bell rang out its warning, I looked to where the waves were black with swimmers. The scene was indescribable. Thousands of men, women and children were swimming and struggling shorewards, a splashing line of heads and arms. The ringing of the bell continued—it was the signal from the lookout that a big shark had been seen coming into the bay.

Although, in fairness to these delightful ocean beaches

of New South Wales, it must be said that sharks seldom come sufficiently close inshore to be of real danger to bathers, there is an occasional accident when people disregard the precautions taken for their safety. A young man recently had been terribly injured by one of these monsters while swimming far out after the prohibited hour of six in the evening. Within a few minutes of the warning signal there was not a single person left in the wide stretch of ocean facing this end of Manly Beach.

The sight-seeing type of globe-trotter would, of course, spend only a few hours in Sydney, because it is a city almost without a past, although there are some trees nearby which were in existence long before many of the abbeys, castles and chateaux of older lands. If one believes in the science of geology there are, however, no older lands in the world than Australia. "Cut off by the ocean for untold centuries—for, though the last to be settled, Australia is geographically the oldest country—the vegetation of the island-continent has developed from the more primitive forms, while its animals, long since extinct elsewhere, are relics of an age when the earth was younger. Immeasurable ages before the deeds were done which evolved the mythologies of India, Persia, Egypt, Greece or Scandinavia, the winds were singing their tremendous anthem through the boundless eucalyptus forests—the kangaroo and emu, the wallaby, the bandicoot, the phalanger, the anteater, the dingo and the flying fox were a society strange and unmolested—and the hills and dales resounded with the weird laughter of the kooka-burra and the cockatoo's shrill shriek. Compared with the antiquity of Australia, its indigenous animals and its vegetation, other countries in the world, old as may be their geological formations and remote their prehistoric evolution, are but of yesterday. Anomalous though it may appear, in passing from England to America the traveller exchanges "an old country" for one very much older; but when he reaches Australia he treads the soil of a continent incalculably the senior of both." Later in my peregrinations I stood on the oldest land surface of the globe.

Chapter 2

AUSTRALIA'S STORY THE MAKING OF A NATION

AUSTRALIA has a thrilling story, but it is of yesterday and to-day. In well under a century this one and only example of "a continent for a nation, and a nation for a continent," has, by sheer hard work, courage and ability made of itself a great, powerful, prosperous and respected country. It has accomplished this, moreover, without the employment of large armies of native or foreign labour, intermarriage with coloured races—with the concomitant evils that this invariably produces—and is to-day one of the great partners of Empire, with a population that is ninety-five per cent of British origin!

That is Australia's story. Its history is entirely English, Scottish and Irish history. Perhaps more than in any other country of the world, long past events have but a small bearing on the present or the future, unless, of course, it is that in which we can all take pride, the survival of the British race. When thinking of the future, both near and far, it should always be remembered that this great continent has no frontiers with mixed races of either inherited ambitions or smouldering animosities. Its horizon is the ocean. Here, if anywhere in the world, a great British nation can be built without fear or favour, if Australia to herself be true.

Doubts exist as to who first sighted the Australian Continent, some historians giving the honour to a Frenchman, who they assert, was driven there from the Cape of Good Hope by contrary winds, others holding that the Dutch ship *Duyfhen* first reached these shores and anchored in Carpentaria Bay, which certainly seems

most likely, as the Dutch East India Company sent many vessels of discovery into the "unknown seas of the south."

In 1642, Anthony Van Dieman, the Governor of Java, equipped and sent forth two vessels, under Abel Janz Tasman, who, after calling at Mauritius, then a Dutch Colony, sailed away into uncharted seas to discover a new land of promise, and after a stormy voyage, fraught with many dangers, landed at Marion Bay on the west coast of Tasmania. His stay on this island was, however, very short. Again setting forth, he sailed about until chance carried him to the shores of New Zealand, thus making a second discovery, with which he rested content and returned to Batavia.

The Dutch sent several other expeditions to explore the coast of what they termed the "Great South Land," but the first Englishman to visit Australia was William Dampier, a captain of buccaneers, who, however, made no explorations owing to the mutiny of the crews of both his vessels.

For many years no further efforts were made to explore this new land, owing to the unfavourable reports given by Tasman and Dampier, until, in 1768, Captain James Cook sailed out of Plymouth Sound, in the barque *Endeavour*, on the first of his many famous voyages of discovery in the South Seas.* After remaining some time at Tahiti for the purpose of taking astronomical observations, and calling at the Society Islands, the *Endeavour* sailed into Tawranga Bay, New Zealand, in October, 1769.

Cook explored the adjacent coast and hoisted the British Flag in Mercury Bay; then he headed for North Island, and took possession in the name of King George. After sailing completely round the three islands which now form the Dominion of New Zealand, the *Endeavour* left the land astern at Cape Farewell, and some weeks later dropped anchor in Botany Bay, Australia.†

* Previously Cook had been exploring in Canada, and had surveyed and charted the shores of Newfoundland.

† The name "Botany Bay" was given on account of the magnificent collection of flora made later by Sir J. Banks in this portion of New South Wales.

“ New South Wales ” still bears the name given to the country by Captain Cook, who annexed it to the Crown of Britain. Many misfortunes attended this adventurous voyage ; the *Endeavour* struck a rock, and several months were occupied in the work of stopping and repairing the leak, which was carried out in a small river near Cape Tribulation, with the surrounding country swarming with hostile natives. Eventually the vessel was sufficiently repaired to enable the sails to be set for England.

Captain Cook made many subsequent voyages in the sloops, *Resolution*, *Discovery* and *Adventure*, accompanied by parties of scientists, and an exploration was made of the coast-line and littoral of Australia, Tasmania and New Zealand. For many years, however, nothing was done by the Government to occupy these lands, or to bring them under administrative control.

About this time great necessity arose in England for clearing the overcrowded convict establishments by deportation, and at the same time the Governments of Lord North and Lord Sydney were, by duty bound, compelled to assist the loyal settlers who had remained true to the King in the American War of Independence of 1776. A suggestion was put forward for the establishment of a loyalist colony in New South Wales, but owing to the regrettable apathy of the Government nothing was accomplished in this direction for many years. Without entering into details of the founding of the first convict settlement in Australia, it may be said that several excellent memorandums were drawn up as how best this could be accomplished, and many well thought out schemes proposed. In 1786, Lord Sydney's Government forwarded instructions to the Admiralty to carry out this expedition, and Captain Arthur Phillip was appointed the first Captain-General and Commander-in-Chief of New South Wales.

The first fleet, composed of nine ships with 443 officers, crew and marines, and 720 convicts (men, women and children), left English shores on the 13th May, 1788, under the command of Captain Phillip, who

proved an excellent first Governor, and a thoroughly humane man. After some delay at the Cape and Rio de Janeiro, where supplies had to be taken on board, Botany Bay was reached in January of the following year. The surrounding country was explored with the object of finding a suitable place for the establishment of the settlement, and sailing through Sydney Heads, Phillip discovered the magnificent harbour of Port Jackson, on the shores of which the convicts were landed, with stores and a guard of marines, and the first colony in New South Wales was founded.

The subsequent trials and troubles of this young colony need not be followed here, nor the founding of similar settlements on Norfolk Island, and in Van Dieman's Land (Tasmania); sufficient to say that the abolition of the transportation of convicts to Australia took place in 1851-3, when responsible government was granted, and to Van Dieman's Land in 1853-4, the name of which, with all its odious associations, was altered in the following year to "Tasmania."

A brief enumeration of some of the most important events in the early progress of this colony may prove of interest to those who have not the time to study the detailed, though interesting, history of Australia. First came trouble with the natives; then an insurrection of the convicts which was quickly suppressed; the alarming growth of the liquor traffic, during which period many labourers received their wages in rum; the difficulties of settling the time-expired convicts as free colonists, and their social status and relation to convicts still in bondage; the construction of public works, which was greatly retarded by want of capital and labour; the first gold rush to Summerhill Creek during 1851-5, when nuggets were found by the score, which after milling exceeded £1,000, in value, and the price of food went up to what was then considered an enormously high figure (wheat 16s. per bushel, potatoes 21s. per cwt., beer 5s. per gallon); then came the political struggles relative to the passing of the Constitution Bill, the question of the land settlement, which gave rise to a



difficulty between the Governor and the Ministry, the former granting a land concession which was endorsed by the Secretary of State, and the Cabinet refusing to acknowledge the right of the Governor, using the Royal Prerogative, to make such a grant. Sir William Denison solved the difficulty by obtaining the seal of the Cabinet and refusing the resignation of his ministers.

Until 1813 settlement in New South Wales was confined to the coastal strip. In that year Gregory Blainland, William Lawson and the native-born William Charles Wentworth overcame the barrier of the Blue Mountains. In 1830 Charles Sturt had a whaleboat dragged over the mountains, and in it he negotiated the Murray, Australia's largest river, to its bar-bound mouth.

Exploring under conditions of terrible hardship, Sturt, Eyre and others revealed the geography of the interior. The ill-fated Burke and Wills crossed Australia in 1861. Stuart (another explorer) crossed the centre of the continent, from Adelaide to a point on the coast near Darwin, in 1862. Ten years later the colony of South Australia put two thousand miles of telegraph line along Stuart's route to link up with a cable and so brought Australia into touch with Britain and the world.

Six colonies grew up. Tasmania, Victoria and Queensland split off from the parent New South Wales. South Australia and Western Australia were separate foundations. When railways came, from 1853 onwards, each colony built lines outwards from its centre. Three different gauges were used. It is now proposed to unify the gauges at an eventual cost of about £A.100,000,000 (£1 5s. od. Australian currency was, in 1948, equal to £1 sterling).

From 1880 onward, may be reckoned the period of expansion. Queensland was formed from New South Wales in 1859, Victoria in 1851, South and West Australia received a great impetus from the founding of the Squatting Districts; and the influx of capital from the United Kingdom was followed by a great increase in the export of wool.

The construction of the first railway was commenced in 1850, the line running from Sydney to Paramatta (an early settlement), Liverpool, Bathurst and Goulburn; these and other partly constructed lines were afterwards purchased by the State, and rapid railway construction became the chief practical policy of the government. The suppression of bushranging next became the problem of the day; many daring robberies under arms were perpetrated, small towns were held up, and life and property became unsafe. In one instance, the gold train from Lachlan was successfully raided, and specie to the value of £14,000 was stolen. This state of affairs, which lasted from 1858-64 brought about an increase in the mounted police forces, and the strengthening of the law against robbery and violence.

Trouble with the 40,000 miners on the Bendigo diggings arose owing to the Government raising the mining licence fees. Riots occurred, but were, however, easily quelled by the military, after a sharp skirmish at Eureka Hill; but the miners obtained their demands, which were a reduction in the price of licences and Parliamentary representation.

In 1861, the miners at Lambring Flats attacked the Chinese, who were then working on the gold diggings at various occupations, and committed barbarities which were accentuated by the refusal of the juries to convict the ringleaders. This was followed in 1868 by the attempted assassination of the Duke of Edinburgh, who was visiting the colony. So infuriated were the people at this unwarrantable attack that they nearly lynched O'Farrell the assassin, and a law was passed sternly suppressing treason. It is thought that O'Farrell was connected with some Fenian Society; and this law, although showing in a conclusive manner the loyalty of the Colonies, was disallowed by the Imperial Parliament, as it was of such a drastic character.

From 1870 to the present day, the whole working population of Australia has been busily engaged in the extension of industrial enterprise, the peopling of the soil, and the general commercial development of the

country. The body politic has been wrestling with problems of the union of the several States and Tasmania. With the successful formation of the Commonwealth, the rise of Australia, as a great British nation, may be said to have commenced, therefore it is advisable to deal more fully with this phase of modern Imperial history.

The achievement of federation offers the most striking example of Australian constructive policy, and, without doubt, greatly strengthened the Empire's position in the Pacific. By uniting the five States of the Continent and Tasmania, not only was an era of more sound statesmanship inaugurated, and inter-colonial commerce stimulated by the abolition of the States customs, but the heterogeneous systems of defence were welded into a united army under the compulsory service law; birth had been given to a growing navy, and thus the true imperial policy of "creating new centres of strength" was successfully commenced.

A brief examination of the various causes which brought about the federation of New South Wales, Victoria, Queensland, South Australia, Western Australia and Tasmania may serve to show that no sentiment of wishing to stand aloof from the family circle of Empire influenced the unification of these colonies under a Commonwealth. The German annexation of part of New Guinea in 1885 gave an impetus to the idea of closer union.

Previously to the London Conference of 1887, Australian defence rested solely upon the volunteer organisations in the separate States, and no provision whatsoever was made for naval defence, distinct from that naturally afforded by the Royal Navy. At this conference between the Imperial and Colonial Ministers an agreement was made for the formation of an auxiliary Australian Squadron, under the control of the British Admiralty, to be maintained in Australian waters, half the cost being defrayed by these colonies.

Military necessities and home affairs brought about a conference in Adelaide in 1897, to which each of the States, as well as New Zealand and Tasmania, sent a

representative, the outcome of which was a strong resolve to pave the way for the federation of all the Australian colonies.

New Zealand gradually withdrew from this union. Being a strong and separate colony she rightly preferred to stand alone, as a separate link in the chain of Empire. Before the federation could be carried out, which took longer than would have been the case owing to the strong and natural opposition of many of the States to giving up, not only a portion of their autonomy, but also a considerable portion of their revenue, as the abolition of the States Customs was a primary factor in the policy of the Unionists, the Boer War broke out in Africa, and a wave of patriotism spread over these colonies as quickly and as strongly as it did over India, Canada and the other portions of the great Empire. Australia sent to this war sixteen thousand horse and foot. It will be of interest to compare these figures with those of the navy, army and air force which the rapidly growing nation was able to maintain for years in the Allied cause in the first and second world wars. No other statistics could provide the same evidence of human, political and economic expansion and virility, or a more striking object lesson of Australia's birth as a world power.

Notwithstanding these events the Commonwealth became an accomplished fact in 1900-1; and the Federal Parliament, like the States Legislatures, is composed of the House of Representatives and the Senate, which is presided over by the Governor-General acting in the name of the King. Both Houses are elected by the people, the members of the Lower House for three years and of the Upper Chamber for six years, appeal is allowed to the Privy Council of the Governor-General.

The principal original laws provided for the sole employment of white men on all mail contract work (the result of the cry raised by Sir H. Parkes "Australia for the Australians"); the illegality of strikes; the prevention of indentured labour, unless the contract be approved by the Government; and the exclusion of Pacific

Islanders and all coloured labourers with the exception of Maoris.

The laws passed by the first few parliaments related principally to the uniformity of the customs duties, systems of defence, postal and telegraph arrangements, the abolition of the inter-colonial duties and the extension of the suffrage to every citizen irrespective of sex. Under the Constitution, the Commonwealth Parliament has the power to make laws concerning, among other things, taxation on a common national basis, defence, external affairs, trade and commerce with other countries and between the States, customs and excise, posts, telegraphs and telephones, navigation, currency, copyright and trade marks, naturalisation, immigration, old age and invalid pensions, and industrial arbitration where disputes extend beyond the boundaries of one State.

Apart from certain matters as to which the Commonwealth Parliament has exclusive power to legislate, State Parliaments have concurrent powers to legislate on the matters committed to the Commonwealth Parliament, but any law of a State which is inconsistent with the law of the Commonwealth is, by the Constitution, declared to be invalid to the extent of the inconsistency. However, the States have, in practice, a general control in their respective states over such important matters as education, the administration of justice, health, housing, agriculture, railways, trade, and industry within the respective States.

The guardian and interpreter of the Commonwealth Constitution is the High Court. Its decision in any dispute between the Commonwealth and one of the States is binding on both parties.

Australia's emergence from the sheltered life of a colony into the full responsibilities of a Dominion of the Empire really commenced in 1906, when the Commonwealth assumed control over Papua, with its three hundred thousand primitive natives. Some of whom had never before come into close contact with a white man. This quarter of the great island of New Guinea had been annexed by Queensland in 1883.

The early life of the young Federation was both stormy and courageous. When war broke out in 1914 and Australia pledged herself to support Britain and the Empire "to the last man and the last shilling," she had a population of only five millions. From this number—with a whole continent to maintain in work and safety—four hundred thousand men were raised, of whom an army 313,000 strong went overseas and sixty thousand died for Australia and the Empire. The Gallipoli landing of April 26th, 1915, gave to history "Anzac Day," observed throughout the great Commonwealth as a National Day of Remembrance.

After the war Australia was given a mandate over the German Pacific territories south of the Equator. Japan obtained a mandate over the German islands north of the Equator. When Japan left the League of Nations in 1932 she kept the islands and fortified them for her coming drive southward. When Great Britain declared war against Germany on September 3rd, 1939, the Prime Minister of Australia stated that, "As Britain is at war, Australia is at war!"

In the early stages of the campaign the Royal Australian Navy fought in the Mediterranean and Atlantic. Three Divisions of the Australian Army the 6th, 7th, and 9th, fought in North Africa, Greece, Crete and Syria. Right up to the defeat of Germany, the major portion of the highly efficient Australian Air Force was engaged in the attack on Germany and Italy; and it accomplished a fine task. The Ninth Australian Division did not leave Suez to return to the Pacific theatre of war until February 1943, after taking a leading part in the El Alamein offensive.

When Japan struck at Australia, the latter had one Division, the Eighth, in Malaya. When Singapore fell on February 5th, 1942, nearly twenty thousand men fell into Japanese hands.

Until United States forces arrived, Australian airmen in the regions north of Australia had to fight against overwhelming odds. But General MacArthur, who took command in Australia on March 17th, 1942, decided that

the Japanese could, in spite of the numerical odds in their favour, be held on a line well north of the mainland of Australia. He was right.

Japanese aircraft almost wiped out Darwin. They attacked other northern ports as well. After their naval defeat in the Coral Sea, however, in May, 1942, the menace of a Japanese invasion passed. Enemy submarines entered Sydney Harbour on the night of May 31st, 1942, but did little damage before they were destroyed.

The Australians out-thought and out-fought the Japanese in the jungle warfare in New Guinea and the islands to the north of it. General MacArthur island-hopped into the Philippines while the U.S. Navy drove westward across the Pacific. In 1944, the British Pacific Fleet, based on Sydney, went into action.

After a couple of atomic bombs the Japanese Government crumpled and capitulated in August 1945. The Japanese were beaten before this, however, and their leaders knew it. The Pacific war brought Australia into very close relations with the United States. It also brought Australia and her neighbour, the Dominion of New Zealand, closer together. In January, 1944, Australia and New Zealand signed the Anzac Pact, the first (but probably not the last) agreement of its kind between two British Dominions. They agreed to create a joint Secretariat, to insist on a real voice in any Pacific settlement and generally to work more closely together.

Australia took a prominent part in the United Nations conferences, and at the Peace Conference talks in Paris in 1946. The Commonwealth enlisted in her armed forces during the war a million men, almost one in seven of the population. With a number of land-workers, including employers, that decreased to 360,000 in 1942, she fed five million troops and others besides her own people, or twelve millions in all. She produced vast quantities of munitions, built aeroplanes, and vastly increased her industrial output of war material. She made a shipbuilding industry out of nothing. She continued to supply a quarter of the

world's fine wool, with a clip each year of more than a billion pounds, or half a million tons, from flocks that rose to one hundred and twenty-five millions in 1942.

The Australians drove all-weather motor roads across the continent, from north to south and from east to west. They made a chain of more than one hundred aerodromes across northern Australia. They built a great new port at Townsville in Queensland, and almost the world's greatest graving dock in Sydney. The Pacific War, in fact, has left Australia with an equipment that might have taken fifty years in peace time. Australia has carried on in spite of a drought in 1944-45 that killed about seventeen million sheep and cut her wheat yield to about a third of the normal crop.

To-day this great country has the largest steel industry to be found south of the Equator. And the Broken Hill Proprietary Company is planning increases, using the iron ore from Yampi Sound, in Western Australia, on one side, and from New Caledonia on the other.

With all the plans in operation for the establishment of secondary and even tertiary industries, wool still remains a main factor in the Australian economy. It is worth anything up to £75,000,000 a year. Australia, South Africa, New Zealand and Britain put into force a plan whereby it would take fourteen years to clear the stocks of wool piled up during the war. The United Kingdom and the Australian Governments, in 1946, signed agreements under which free or assisted passages have been granted, for some years, to approved British settlers.

All this, however, is a part of to-day and of to-morrow, a story that has yet to be woven into Australian history. As such it will be treated separately in future pages. Little more than one and a half centuries old, Australia has risen from a land inhabited by Stone Age aborigines to a continent-wide nation of millions of British people, who have made world records in productivity, development, statesmanship and war. What of the next century?

Chapter 3

DEFENCE—AUSTRALIAN AND IMPERIAL

THE armed forces of Australia are being steadily reorganised and expanded on very sound lines. About two years after the Second World War the Government accepted the principle that an *assured defence programme over a period of years* is the only basis on which the planning and balanced development of the armed forces of the Crown in Australia, and the co-related departments, can be satisfactorily created and maintained at a safe standard.

The defence programme for the five years ending in 1952 allows for an average annual peacetime expenditure of £A.50,000,000 or £A.250,000,000, spread over the five years from 1947-8.

Details of the post-war defence policy were given in the House of Representatives on June 4th, 1947, by the Minister of Defence. He said it is realised that the figures are substantial for a peacetime defence expenditure following so closely on a victorious war. But it was the amount in present circumstances which should be devoted to defence. It also contained a substantial element, having regard to Australia's limited resources, towards the relief of the burden in Empire defence so long carried by the United Kingdom.

The Prime Minister of Australia said at the time, "I told the Conference" (of Prime Ministers of the Empire in London) "that it was recognised that Australia must in future make a larger contribution towards the defence of the British Commonwealth and that this could best be done in the Pacific."

The programme approved by the Government for the five current years provides for an expenditure 450 per cent. greater than the total cost of defence in the five years immediately preceding the outbreak of the Second World War. An arresting feature of the new programme was the introduction for the first time of a substantial allocation of money for scientific research and development. The three fighting services will each receive the following average annual amounts. The Navy £.A. fifteen millions, the Army £.A. twelve and a half millions, the Air Force £.A. twelve and a half millions; and for scientific research and development £.A.6,700,000. The Departments of Munitions, Supply and Shipping receive £.A. three and a half millions.

In stating here the whole basis of the Defence policy of the Commonwealth, it would seem best to give it very largely in the official form of the Government Departments concerned.* Australian security will rest on a blending of three safeguards which are complementary to each other, and no one of which is exclusive of the others. They are :—

(1) the Forces to be placed at the disposal of the United Nations for the maintenance of international peace and security, including regional arrangements in the Pacific;

(2) the Forces to be maintained under arrangements for co-operation in British Commonwealth defence;

(3) the Forces to be maintained to provide for the inherent right of individual self-defence.

The nature and extent of the provision so to be made for defence will be influenced by the state of development that has been reached in organising a system of collective security and a scheme of British Commonwealth defence, and the degree of reliance that can be placed upon them. Pending the growth of a scheme of collective security under the United Nations, which will necessarily be slow, reliance must primarily be placed on co-operation in Empire defence.

SCIENTIFIC RESEARCH : The whole question of post-war defence policy is affected by the impact of scientific

* Bureau of Census and Statistics and Department of Information.

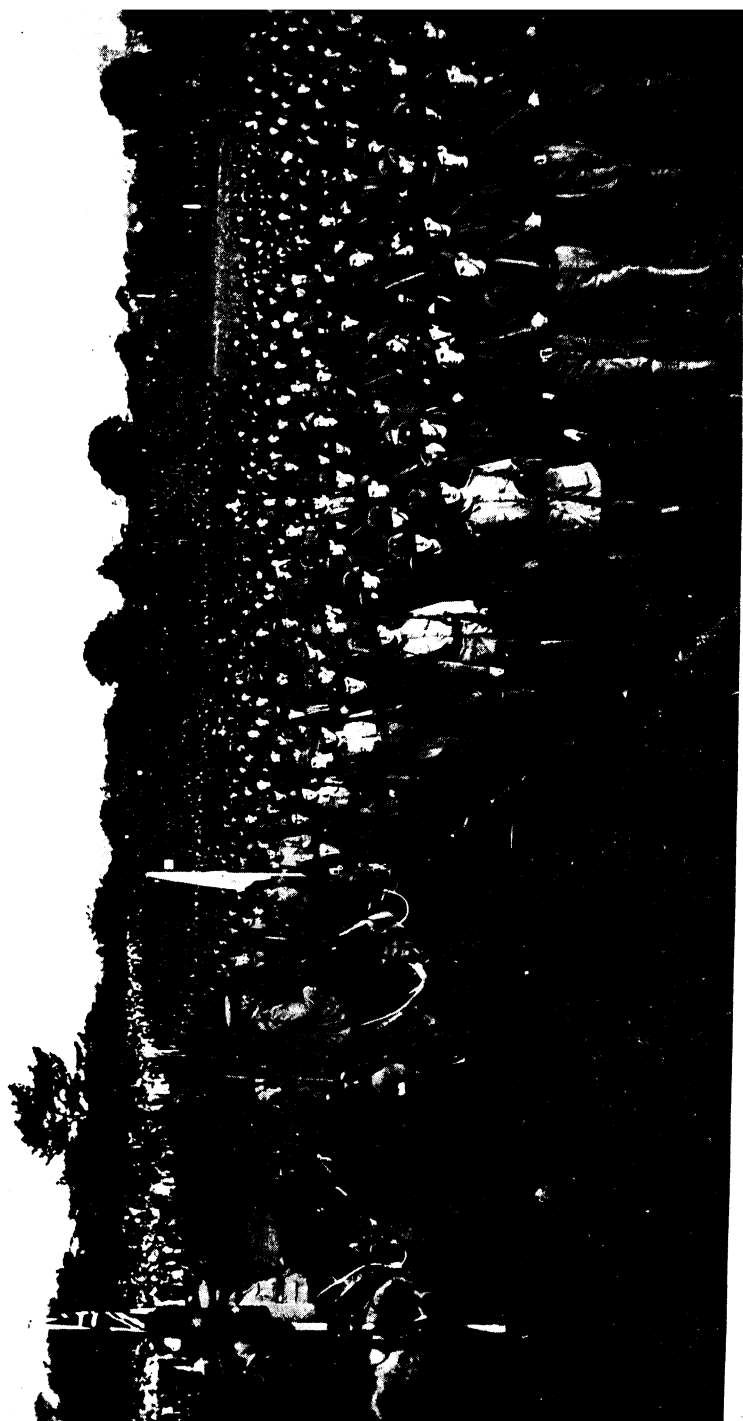


IMMIGRANTS OF YESTERDAY—CITIZENS OF TO-DAY

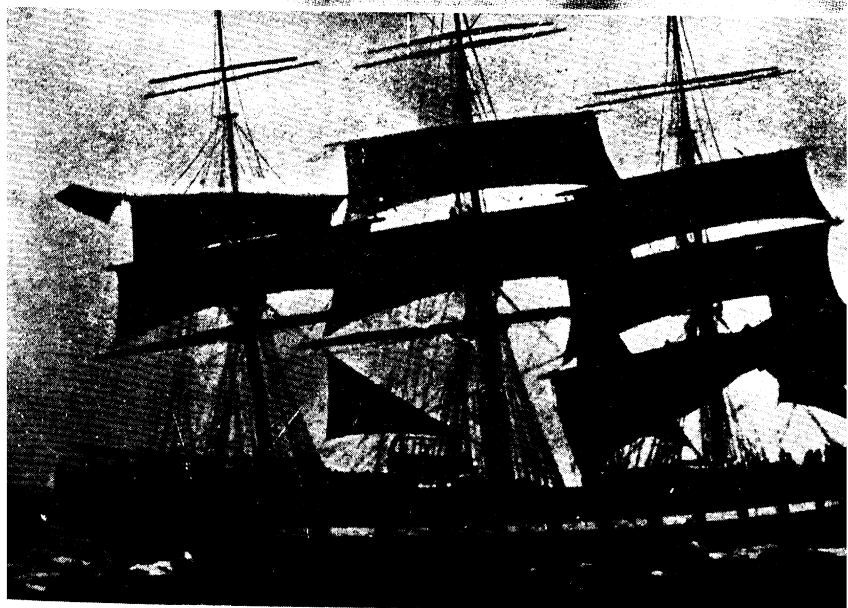
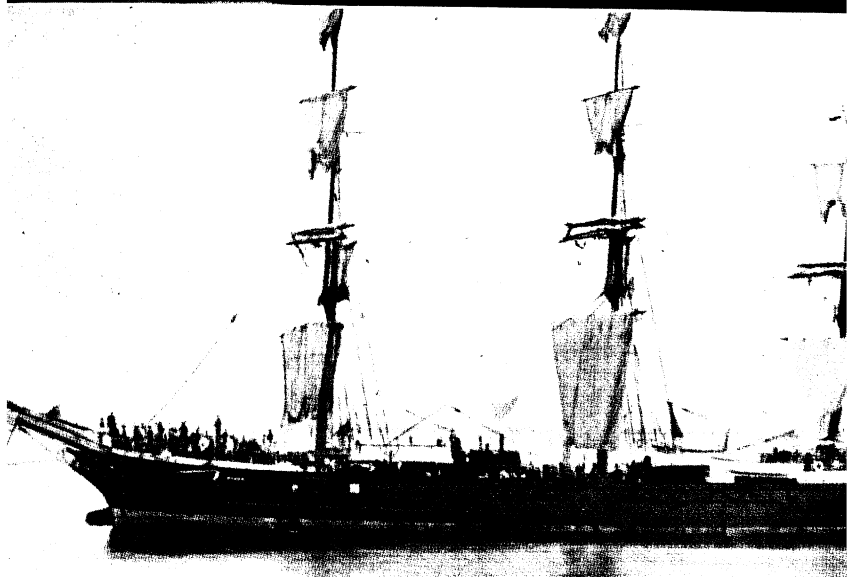
Above: A happy group on the deck of an emigrant ship in the early years of the Century

Below: Circular Quay, Sydney, 1912



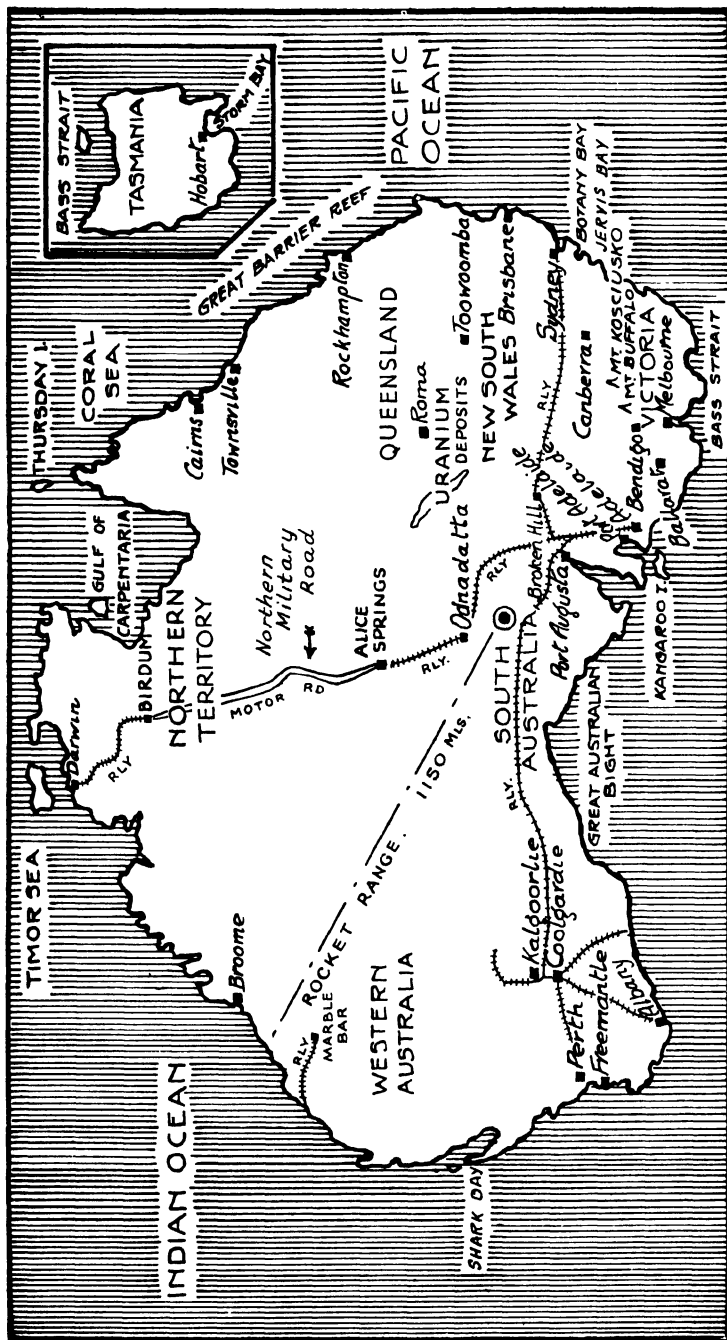






BOUND FOR AUSTRALIA IN THE 'SEVENTIES & 'EIGHTIES OF LAST CENTURY

1. Square riggers off Port Victoria, S. Australia
2. An emigrant ship leaving the Thames for Australia



AUSTRALIAN DEFENCE PLAN

Showing projectile range; North to South strategic rail and motor road; and railways adjacent to the rocket range.

development on the types of weapons and armament for the various Services.

Whilst supporting international control of weapons of mass destruction, Australia is dependent for defence on existing weapons and believes it would be folly to dispense with them until they are replaced with others that have been fully tested and tried.

To achieve a blending of Service and Scientific advice the Government has recently added to the higher defence machinery a Scientific Advisory Committee and a New Weapons and Equipment Development Committee. From the combined work of Service and Scientific staffs there will ultimately emerge a conclusion on the probable nature and methods of future warfare, which will furnish a firm basis for the introduction of new weapons.

In the periodical reviews of the whole programme to be made by the Government, the results of scientific development will be under constant notice and the effect of such developments on the organisation and weapons of the forces will be continuously studied and applied as the necessity arises during the currency of the programme.

NAVY: It is proposed that by the end of the five year programme the following naval ships should be in commission: *Squadron*: two light fleet carriers, two cruisers, six destroyers; *Escort Forces*: three frigates; *Surveying Duties*: three survey ships and their tenders; *Training Ships*: one frigate, two mine-sweeping vessels, three air/sea rescue vessels; *Auxiliary Vessels*: one ocean-going tug, one ammunition vessel, two boom defence vessels. In addition, seventy-nine vessels will be held in reserve, including a cruiser, two destroyers, six frigates, and thirty-one mine-sweepers.

There will be 14,753 personnel in 1951-52. First stage of the naval aviation plan was implemented in 1947-48. It included the acquisition (but not the commissioning) of the first carrier. Provision is made for the maintenance in Australia of a nucleus ship

construction and repair industry capable of expansion in war. It was proposed to spend an average sum of £2,500,000 a year on the completion of the post-war destroyer programme of two then under construction and four to be laid down.

ARMY: The programme for the Army provides for the raising of the following forces, with a total strength of 69,000. The *Permanent Forces* will consist of one independent brigade group (including three infantry battalions and an armoured unit, as well as the necessary supporting troops) with a strength of 4,470; fixed establishments (fixed defences, base and administrative troops and training units) with a strength of 13,380; cadres for instructional, administrative and other duties with the citizen forces having a strength of 1,150. Total permanent forces 19,000; *Citizen Forces*: a field force of two infantry divisions, one armoured brigade group and selected corps units with a strength of 48,850; fixed defences with a strength of 1,150. Total strength of citizen forces 50,000 men.

The personnel of all forces are to be obtained by voluntary enlistment. Initially, when raised, all permanent field force units formed part of the occupation forces in Japan.

The Royal Military College has been expanded and other facilities will be provided for the training of officers. It is intended that citizen forces will be better trained, organised and equipped than before the 1935-45 war. This, together with attractive conditions for service, will be of great importance under the voluntary system in keeping the citizen forces at full strength.

AIR FORCE: Home Defence: A static home defence organisation of seven squadrons as follows, together with miscellaneous associated units; at least four interceptor fighter squadrons (which are Citizen Air Force Squadrons), with unit equipment of eight aircraft each; one heavy bomber general reconnaissance squadron, with unit equipment of eight aircraft; one target-towing squadron (which will specialise in

maritime offensive operations for its secondary rôle), with unit equipment of eight aircraft; one air/sea rescue squadron (which is trained in addition as a general reconnaissance bomber squadron), with unit equipment of six aircraft. There will be a total of fifty-four aircraft and 1,182 personnel. Citizen Air Force squadrons will be adjacent to main centres of population for the close defence of vital strategic centres.

Task Force Elements: There will be a group of task force elements which, in an emergency, can be organised with suitable supporting ancillaries and headquarters to provide a force for employment for strategical purposes and in support of other Services. It will consist of nine squadrons as follows: two long range fighter squadrons, with unit equipment of sixteen aircraft each, totalling thirty-two aircraft; three heavy bomber squadrons, with unit equipment of eight aircraft each, totalling twenty-four aircraft; two transport squadrons, with unit equipment of eight aircraft each, totalling sixteen aircraft; one tactical reconnaissance squadron, with unit equipment of nine aircraft; one survey squadron, with unit equipment of nine aircraft. There will be a total of ninety aircraft and a personnel of 2,061.

There will be a training organisation with a strength of 3,175, a maintenance organisation with a strength of 2,804, and a headquarters command and miscellaneous units with a strength of 3,403.

The total strength will be sixteen squadrons with a unit equipment strength of 144 aircraft, backed up by 439 reserve operational aircraft and 698 aircraft for training and miscellaneous duties. The total personnel strength will be: Permanent 11,930; Citizen Air Force 190; Civilians 505; total 12,625. Provision is also made for a R.A.A.F. reserve, including personnel drawn from recognised aero clubs and air training corps. Adequate airfields on the mainland and on mandated islands will be maintained for strategic purposes.

IMPERIAL DEFENCE AND ATOMIC WARFARE: The Australian Government has proposed to the United Kingdom and New Zealand Governments a procedure for representation in the Australian Government's machinery for matters of co-operation in British Commonwealth defence.

It is proposed also to constitute the machinery to deal with and revise the wide range of subjects covered by the Commonwealth and Departmental War Books.

Important new aspects of civil defence have been under consideration for some time. Adequate measures for the defence of the civil community against attack by atomic and biological weapons must be based on proper scientific investigation which has not yet reached a stage to enable planning and other measures to be soundly developed. After this stage has been reached and a report has been made by the Defence Committee and the Defence Scientific Advisory Committee, it will be possible to establish a Committee on Civil Defence representative of the Australian Commonwealth and State authorities, to recommend the plans and measures that should be taken.

GUIDED PROJECTILES: One of the most important achievements in the research and development sphere of Australia's armament programme is undoubtedly the establishment of the Guided Projectiles Range. The United Kingdom and Australian Governments are in close association regarding the whole of this new and important field of modern warfare.

After extensive surveys over the proposed area it was decided to establish the "Range Head" at Woomera, some ninety miles south-east of Mount Eba, the first proposed site. Problems connected with water supply and transport facilities necessitated this change. Woomera is situated about six miles from Pimba on the east-to-west railway across the Nullabor Plain, between Adelaide and Perth.

The three air strips constructed at this spot in the vast arid waste that stretches away for hundreds of

miles, are each five thousand feet long. One of these will later be extended to a length of five miles. This will permit the heaviest transport planes of the near future to operate with safety. Roads have been and are still being constructed to connect the various sections of the long range.

In June, 1947, an official delegation of the "Long Range Weapons Board" accompanied by Service Chiefs and technical experts inspected the launching site; and the plan for the construction of the scientific and administrative buildings and for the township to accommodate at least five hundred families was approved. The technical establishment and the launching site is several miles from the township. Salisbury munition factory, near Adelaide, is being used for the assembly and adjustment of the projectiles. Mallala aerodrome, nearby, is the air transport base between Salisbury, and Woomera. This airfield was the one used during the war of 1939-45 as an R.A.A.F., training centre. Big additions are being made to this base of operations. The first guided projectile was launched in July, 1948, and three thousand square miles of territory have been set aside for long range weapon tests. Adequate security measures have been taken.

NORTHERN NAVAL BASE: Before the war the Admiralty Islands, of which Manus is the largest, were held by Australia as part of the Mandated Territory of New Guinea. Under the League of Nations International Agreement it was not possible to construct fortifications on Manus, but the island became one of Australia's northern defence outposts late in the year 1941, when a small detachment from Australia's No. 1 Independent Company was sent there for garrison duties. This detachment after performing meritorious service managed to escape to Madang when the Japanese landed 500 troops in Lorengan Harbour, on April 8th, 1942.

About two years later—during February and March, 1944—weak Japanese resistance to air attacks suggested that the enemy garrison had been reduced.

Accordingly, General MacArthur ordered a reconnaissance in force of Los Negros, at the eastern end of Manus Island. The beaches were stormed by U.S. troops after a naval bombardment in which Royal Australian Naval ships took part. Japanese resistance in the island was finally broken by attacks from the sea in March 1944.

Manus Island was developed as an important offensive base for operations against Japanese forces to the west and north-west, in the Phillipines. Besides being used as an attack centre by United States forces, this island, with its fine natural anchorages, became important in the Pacific operations of the Royal Navy and the Royal Australian Navy. It is now being developed and maintained as an advanced outpost of Australia's Naval and Air Defence, instead of the existing base at Dreger Harbour in the Huon Peninsula of New Guinea.

Chapter 4

NEW SOUTH WALES—BEGINNING AT THE BEGINNING

THERE is one spot in New South Wales, which, by its picturesque name, must attract all who come to Sydney. It is the Blue Mountains, a magnificent plateau about three thousand feet high, forming part of the great Dividing Range which runs the whole length of Eastern Australia. It was from Katoomba that I obtained my first view over these forest-covered cliffs and crags tinted a bluish-grey by the sunlight and the vast distances. Although these mountains are of rare beauty, the scenery is strangely different from the snow-clad peaks and rushing torrents which one usually associates with mountains. Their most striking characteristics are deep canyons worn by the torrents of past ages. Standing on a rocky ledge in the National Park, I looked across an immense stretch of billowy ranges and the tree-filled valleys of giddy depths. Here and there a lonely inaccessible crag stood out sharply defined against a cerulean sky.

The view from the top of the Wentworth Falls far surpasses that obtained after one has climbed down the hundreds of steps into a deep valley to see the fern gulley into which these waters leap from a great height. When looking across from summit to summit the vastness and the colouring cause that involuntary indrawing of the breath which is the sure sign of a really awe-inspiring vista. Vivid blue ranges tower up to light-filled skies.

This portion of the Great Dividing Range, distant about forty miles from Sydney, derives its name from

the beautiful haze with which the region is always mantled. Grey-blue valleys and majestic mountain-tops extend as far as the eye can see. Over the whole range there is the faint scent of the eucalypti and wild flowers. The many waterfalls, the rugged grandeur of great cliffs and deep, fern-clad gorges, sylvan glens, and striking contrasts in colour effects, provide scenes of unsurpassed beauty and charm in this glorious region. As the Blue Mountains are distant only two hours' by express train, it is possible to surf on one of Sydney's beaches in the morning, have lunch in the Blue Mountains, play a round of golf in the afternoon and return to Sydney in the evening.

From Katoomba I journeyed by motor-car through valleys and over mountains, often clothed in forest, with a wealth of red Christmas bush, white flannel flowers, and the great scarlet blooms of the waratah, to the blue gums of the Kanimbla Valley and the world-famous Jenolan Caves. At one point, just before reaching the Caves House Hotel, the road circled round a mountain and then plunged into the Grand Arch, a natural cavern in limestone which traverses the heart of a blue giant. The dweller above ground can have but little idea of the extraordinary rock formations existing in the earth below until he has visited these amazing caverns. I went from cave to cave by broad galleries illuminated by electric light. Each chamber seemed to be more marvellous than the one before. Suddenly a mysterious river appeared from out of the gloom of this underworld upon which the sun has never shone. There are miles of subterranean wonders, and for a whole day the untiring guide showed me cathedral naves in scintillating rock, organs of stone, stalactites and stalagmites made by the trickling waters through countless æons of time depositing the material held in solution, and so building these yard-long stone icicles at the rate of less than a foot in a thousand years.

In the "Casket of Jewels" I saw by the flash of magnesium light a million diamonds reflect tiny pin-points of prismatic fire. The "Crystal Palace" blazed

with mysterious light and dazzling reflections. The Madonna and Child are life-like images carved out of the limestone by the hand of Nature in the eternal darkness of these deep recesses of the earth. A figure that is pointed out as "Lot's Wife" stands out in startling white against the dim background, for the guide throws a beam of electric light on to the object it is desired that one should see. The "Tapestries" hang in graceful folds, which probably occupied a mere ten thousand years in the making; and some stone columns are just the stalactites of past centuries that now resemble the pillars of a vast cathedral.

Coming out of this realm of darkness gave me the impression of returning to the living world after a visit to some planet where all is still and lifeless. On the following day I returned to this underground wonderland, which fascinated me in a way that no other caverns have ever done. I saw a frozen sea, with the waves stilled as they were about to curl over, the "Devil's Coach-House" and a bridal veil of lustrous pearls. Eventually a feeling of remoteness from all earthly things stole over me, and I shivered. Perhaps it was the outlines of the bones of a great prehistoric animal which had been trapped in this cave and sealed up for hundreds of centuries that caused this uncanny sensation, and I was glad when the time came to return to the warm sunlight and the land of the living.

The Jenolan Caves are more than one of the great sights of the world, they provide a human experience, such as flying above the clouds and diving beneath the sea. The memory lives for ever. What a land of contrasts this is! Ignoring the passing of miles and hours I found myself one day in early August at a comfortable winter sports hotel near Mount Kosciusko, over five thousand feet up, in the heart of the Australian Alps, which curve through the State of Victoria and cross into that of New South Wales. Here, amid the winter snows, I revived memories of another Alps, in far-away pre-war Switzerland. The summit of Kosciusko is 7,305 feet high and the surrounding snowfields extend

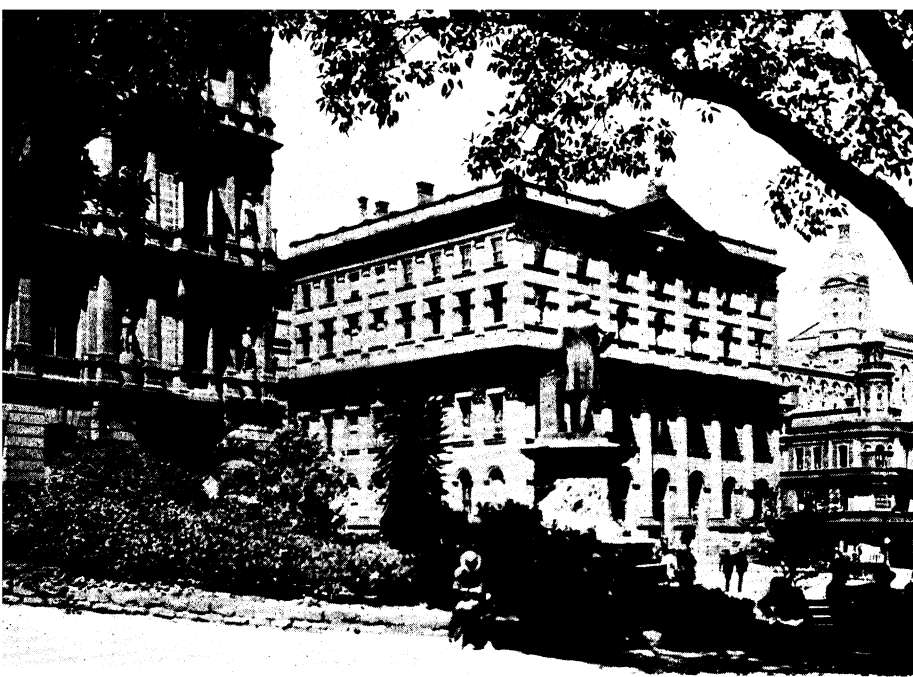
over a million acres. There is also a chalet hotel at an elevation of six thousand feet. Both of these places are owned and operated by the State. Although the frost was not so sharp "down under" as in Switzerland in winter, the snow was abundant, the ski-ing good and the party a merry one. It was difficult to bring oneself to believe that queer sounding *Kosciuko* with its northern Christmas-tree appearance and its snow sports, so close to the half-built but stately Canberra, Capital of the whole continent of the Commonwealth, was really another of its surprises.

If Australia offers the greatest possible variety of scenery and climate, as will be observed more closely when the whole country comes under detailed review in the following pages, there is also much that differs—much that needs to be sympathetically understood—in the life and customs of its people. An early experience of this came while visiting a mixed station in the west of the fertile and well-watered Lachlan district of New South Wales, for it was here that I first met a "sundowner." He came slouching up to the homestead with his "bluey" and "billy." He must have been well over seventy but was surprisingly active in all his movements, loping along behind him came a sharp-nosed and mangy-looking dog. I have met beachcombers in the wilds of Peru, educated white men who have gone native in Brazil, and others who held the view that "everything you get, gets you"; but the genuine sundowner of the Australian wilds is something quite different from the beachcomber. He is an institution, part of a time-honoured system.

There are two very good reasons for the name of "sundowner." One is that these gentry of the open road usually arrive at the homestead just as the sun is going down, when, not only is it too late for them to be asked to do a job of work, but also they are just in time for the evening meal. The other reason is that they move north through South Australia and the western part of New South Wales with the coming of winter to the warmer climate of Queensland, returning when the



THE BLUE MOUNTAINS, NEW SOUTH WALES



Above : THE DEPARTMENT OF LANDS, SYDNEY

Below : SYDNEY, FROM THE AIR. St. Ignatius College in the foreground.





Above : GRAFTON, NEW SOUTH WALES

Below : LIFE-SAVERS IN ACTION





Above : TAMWORTH, NEW SOUTH WALES

Below : NEWCASTLE, NEW SOUTH WALES



rains set-in up north and the sun shines on the sheep and cattle stations of the southern states. They seldom have any money or possessions beyond what they can carry wrapped in their "bluey," or coloured blanket.

Old-established custom in the more remote countryside, west of the coastal range, requires the giving to all travellers on the road of a meal and a bunk in which to sleep the night without charge or requiring work to be done in exchange. I have heard it said that the meal offered must include two pounds of meat, an equal quantity of flour as well as several ounces of sugar and tea. However this may be, the old sundowner more than earned his night's hospitality by telling me some strange tales of the overland trail to Queensland, along which he had been wandering for twenty years. I have never been able to make up my mind whether he himself or the tales he told, each in a few vivid words, were the most queer.

One of his stories was of a bush fire close to a little Italian settlement in Northern Queensland. Apparently the heat from the flames, which were three miles away and not sweeping towards the wooden bungalows of the sugar plantation in the broad clearing, suddenly caused a shower of sparks to fly backwards against the wind and ignite a pile of sugar-cane. Within a few minutes the twenty odd people in the bungalows, or waiting to beat out any flames that approached down wind, found themselves cut off by two semi-circles of flame. Every man, woman and child perished.

When I asked him how it was that he alone had succeeded in escaping, he told me, quite simply, that directly he realised they were all in a circle of fire he stripped off his clothes, except his boots, and dashed naked through the comparatively narrow belt of flames *to windward*. He asserted that the cushion of perspiration protected the skin for the first few seconds of its exposure to each spurt of flame, and by swift movement regardless of small burns there was nothing to catch alight and be *carried along* as there would have been with clothes on!

I thought the story to be just an appropriate campfire yarn by an old sundowner ; until, one day long afterwards, I repeated the tale to a little group in the captain's cabin of a liner at sea. The Chief Engineer was the only one of those present who did not laugh. Then he said quite seriously, " that old sundowner had either worked in a blast furnace or knew the secret of the native fire-walkers. Have any of you seen natives pass with bare feet across glowing cinders which do not emit sufficient flame to reach their loin cloths ? As a young man in an engineering shop on the Clyde, I used to dip my finger into molten lead for a bet of two shillings. There is a cushion that *momentarily* protects the skin from both heat and flame, and the period, although always short, is prolonged for a fraction of time by profuse perspiration."

I did not tell them that this old man died two years later in the homestead of a friend and he left me a strange instrument and a still more strange little notebook, both of which I have to this day. He had once studied medicine, whether or not he had taken a medical degree I never knew ; but half a century ago he practiced in the Australian bush and specialised in the cure of rheumatism. He believed in what he called " the theory of the aqua-puncture." The instrument contained a dozen sharp needles, on a little circular plate, which were shot into the skin by an elastic band. Then, into the circle of tiny skin-punctures he rubbed bee-sting mixed with olive oil. And the neatly written notebook contained his whole system and list of cases and cures. *There is no mention of fees.* He was welcomed by the cowboys, or drovers, at every camp-fire on the long overland trail that comes down from Queensland to Marree, in South Australia.

New South Wales, the parent State of the whole of Australia, has an area of 309,433 square miles, being nearly three times the size of the United Kingdom, and the population is about three millions, of whom considerably over a third reside in Sydney and its suburbs.

The great variety of climate and soil found in this State enables both semi-tropical and temperate agricultural products to be grown within its borders. On the coast plain, which has an area of fifty thousand square miles, wheat and maize grow in abundance, and sheep and cattle are reared in thousands. The production of wool in New South Wales, alone, averages about five hundred million pounds a year. In the North, on the Queensland frontier, sugar-canes, grapes, tobacco and tropical fruits are largely cultivated, and the manufacture of wine is a growing industry; on the lofty plateaux of the "Dividing Range," which crosses the middle-west portion of this State and follows a northerly course through Queensland, the vegetation of temperate climates flourishes.

A large portion of the interior is covered with mallee scrub, and is subject to long periods of heavy rainfall followed by a drought of equal duration, but the numerous rivers make up for the scarcity of water during certain seasons. The principal rivers are the Lachlan, the Darling, the Murrumbidgee, the Hawkesbury, the Hunter, and the Macintyre, several of which are tributaries of the first two mentioned.

The Blue Mountains and the Liverpool Range cross New South Wales almost parallel to the coast, at a distance inland varying from twenty-five to one hundred and fifty miles. In the south many peaks rise above the snow-line.

That portion of the interior which lies between the Rivers Murray and Lachlan is known as "The Riverina," and being well-watered, as its name implies, is a fine agricultural district and well timbered. The far west is occupied by the "Great Plain," which presents a characteristically Australian contrast to the eastern slopes of the Dividing Range. The grass seas are dry and burnt, and scarcely a single clump of trees breaks the succession of parched coarse grass and mallee scrub. Nevertheless, this huge portion of New South Wales is rich in flocks and herds; on the seemingly endless plains millions of sheep find sustenance. Spread far out over the rolling

prairies the houses, or out-stations, of the sheep-runs may be seen surrounded with pens, corrals, and all the appliances of the pastoral industry. A thin column of blue smoke from the homestead ascends like a scaffold pole in the hot, still air ; and blurred by the blue haze of distance are gigantic patches of wool, for sheep are so plentiful in Australia that their principal value lies in the wool obtained from shearing. There are, in this State, over forty-four million sheep and three million cattle.

Broadly speaking, New South Wales is naturally divided into several well-defined geographical divisions or districts. Mountain ranges, consisting largely of elevated plateaux, extend along the coast line at a distance of from thirty to one hundred and fifty miles from the sea, the intervening lands comprising the coastal district and embracing about 22,300,000 acres. The coastal strip includes some of the most fertile areas in Australia. It enjoys the heaviest rainfall, is watered by many rivers and smaller streams, and spread over it are prosperous holdings on which thousands of people carry on a great dairying industry, besides cattle grazing and, in parts, extensive agricultural operations. The northern, central, and southern tableland districts, of which a considerable portion is rich in agricultural land, are 25,900,000 acres in extent. From the plateaux great slopes descend gradually to the westward and merge into the central western plains, embracing in all 69,500,000 acres devoted chiefly to sheep and cattle grazing and the growing of wheat. The plains of the far west, which make up the Western Division of the State, exceed 80,300,000 acres, and are devoted mainly to the raising of Merino sheep.

The value of the primary production averages about £.A.100 millions. The area under wheat is about four million acres out of twenty million acres of suitable land. Agricultural production alone averages about £.A.20 millions in annual value.

The climate of New South Wales is so equable that stock may be left in the open even during the winter months, always providing that the surrounding country

is not sufficiently low to cause it to be subject to the floods which are prevalent in certain parts during the wet season. The Valley of the Darling, which may be considered one of the most fertile portions of the western plain, has on several occasions been flooded over an area twenty miles broad and three hundred miles long ; but this calamity seldom happens, and when it does the enormous size of this State and its still comparatively unexploited condition make it no difficult matter for the farmers to drive their flocks to a higher region, and there wait for the waters to subside. One great advantage here derived from floods and rains is that in less than a month after the disappearance of the water the country is covered with rich grass, and turned into a veritable garden.

It must not be supposed that the whole of New South Wales is liable to inundation and drought, for, although much of the western plain suffers from the rigour of the seasons, the eastern slopes of the Blue Mountains, and the great coast plain, are exceptionally fertile and enjoy a fairly regular rainfall.

The area of this state, and its diversified surface and climate, enable the settler to choose an almost ideal locality for either pastoral, agricultural, or horticultural industry.

West of the Darling River, on the frontier of South Australia, lies the Barrier Range, which contains the Broken Hill Mines, the richest silver-lead-zinc region in Australasia. The deposits extend over an area of about two thousand square miles.

The largest portion of the trade with these mines, and also with the towns of Broken Hill and Silverton, two of the most important centres in the interior, is carried on with Adelaide, the capital of South Australia, for, although these places are really within the New South Wales border, they are situated much nearer to Adelaide than they are to Sydney. Gold mining is carried on in the Grey Range, which lies across the frontiers of three adjoining States.

Broken Hill is the centre of the chief metalliferous mining district. Immense wealth has already been

extracted from the extensive silver-lead deposits of the district, and experts estimate that the life of the mines there will exceed one hundred years. The nearest sea outlet being Port Pirie, in South Australia. The population of Broken Hill exceeds twenty-six thousand.

The average annual value of the minerals produced in New South Wales is about £16,000,000, of which coal accounts for half and silver-lead-zinc for one-third.

To describe all the pastoral and agricultural towns which are dotted over the enormous area of the sheep-lands of New South Wales and the other even larger States would occupy undue space, and is quite unnecessary, for they closely resemble small country towns in the United Kingdom. It must be remembered that the composition of the population of Australia is more truly British than the inhabitants of London ; in the country towns and districts over 96 per cent being of British origin, of which a considerable portion were born in the Old Country.

Newcastle, the second largest city in the state, is sixty-two miles by sea, and one hundred and two miles by railway, north of Sydney. Situated on the shores of Port Hunter and on the fringe of the largest coalfields in Australia, it is one of the busiest industrial centres in the Commonwealth. In addition to its mining activities, it has the largest iron and steel works in the Southern Hemisphere, many allied industries, a great Government-owned shipbuilding yard and a floating dock. The Valley of the Hunter River is also one of the richest areas in the State ; and agriculture, dairying, and fruit-growing are carried on extensively both north and south of the city. The import and export trade has grown to fairly large dimensions. The population of the city and district exceeds 127,000.

Newcastle is not the only coalfield in New South Wales. Mines, which produce a quantity of iron, are now being worked at Lithgow, Katoomba, and Wollongong, all of which are within easy reach of Sydney, and use that port as their emporium. There are many good-sized towns in this State ; the most important of which,

other than those already mentioned, are Maitland, an agriculture centre in the "Black Country," near Newcastle; Liverpool, Parramatta, and Morpeth, Bathurst, Goulburn, Orange and Wellington, all railway centres.

On the coast, in the north of the State, lies the large district known as "New England," which is composed of fertile lands encircled by the Hastings, New England and Macpherson Ranges. Here horticulture has assumed considerable proportions, and wheat and cereals grow in abundance. The chief towns of this well-watered region are Port Macquarie, Kempsey, Gladstone, Grafton, and Maclean, on the coast; and Lismore, Tenterfield and Armidale, in the interior.

The country surrounding Sydney is not rich in gold, there have been no fields like those of Bendigo and Ballarat, near Melbourne, but it possesses some of the most valuable coal, copper and tin mines in Australia. At Cobar, which is connected by railway with Sydney, the copper deposits almost equal in value those of Mount Lyell, in Tasmania. The country around Glen Innes, which is about three hundred miles north-west of the capital, is famous for its tin mines; and, of course, the coalfields of Newcastle are of the greatest possible value to Sydney and the whole State.

Although the manufacturing industry employing over three hundred and thirty thousand people in some twelve thousand factories, is rapidly increasing in many of the towns (output between one hundred and fifty and two hundred million £.A.), and there has long been considerable activity in mining undertakings, New South Wales relies principally upon the pastoral and agricultural industries which flourish all over the State. The slightest fall in the price of wool has its reflex in Sydney and many other towns in Australia; but the steady increase of the cultivated area on the coast plain and the development of semi-tropical plantations in the north, are rapidly giving a greater economic stability to this portion of Australia.

Chapter 5

CANBERRA: THE FEDERAL CAPITAL AND ITS PLAYGROUNDS

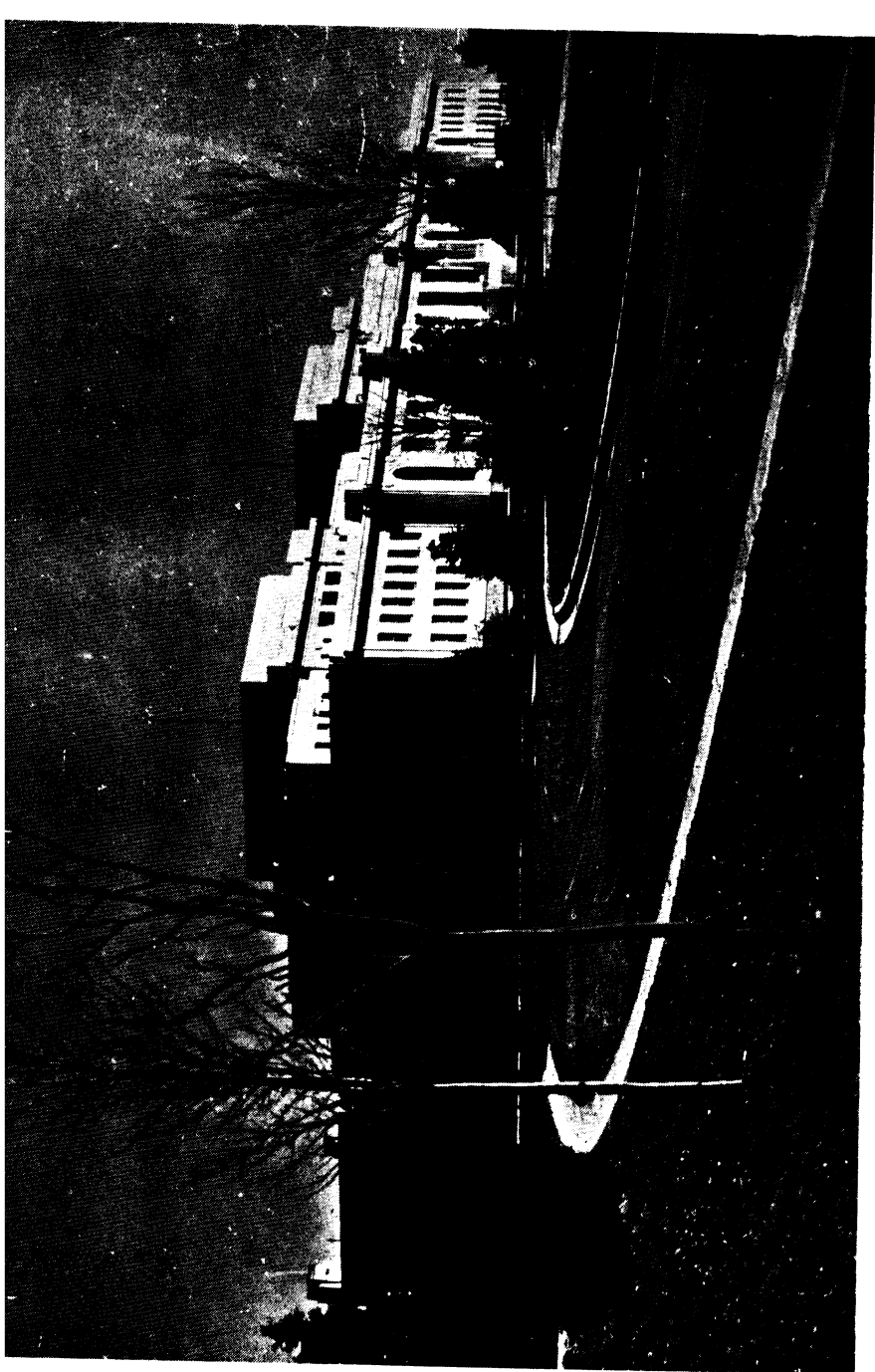
"THE SNOWY MOUNTAINS," this is the picturesque name they give locally to a spur of the Australian Alps which approaches the nine hundred and forty square miles of the two thousand feet high plateau, in the southern corner of New South Wales, which forms the Federal Territory of Australia. It is a most picturesque site for the capital city of the Continent. Encircled by tree-covered hills, yet affording in every direction those wide panoramas of undulating country so typical of this vast land.

A curious phenomenon, noticed by many who know the eastern littoral of Australia, and one for which I can offer no proper explanation—unless it be a trick of refraction—is that, whereas most of the Queensland coast seems to possess a mauve or, at times, a violet tint, much that is seen of New South Wales, east of the Dividing Range, appears to be illuminated by a blue light. Against this—which I have actually seen reproduced by colour photography—white shows up vividly, but the green of foliage is given a veil of bluish-grey.

Doubtless, this is the explanation for the recurrence of such names as the *Blue Mountains*, *Snowy River*, *The Blue Hole*, as well as many similar titles. However this may be, and I know that these tricks of light and tint do not always present themselves to those whose eyes have grown accustomed to them, the hills and mountains encompassing this little Commonwealth State must certainly be the land of the blue horizon.

Opposite.—View from the air of part of suburbs of Canberra, Australia's national capital. Sports ground at left is Telopea Park with, behind, cinema theatre and St. Christopher's Church (right) in front of the Manuka shopping centre. Spreading out to rear is the suburb of Griffith. Oval in centre is part of the grounds of the Telopea Park public school (right of oval). In foreground is section of the suburb of Barton. The view shows the planning of the capital with the liberal spaces allowed for parks and gardens. Symbolising Australia's nationhood and ideals, Canberra is zoned city designed from plans submitted in an international competition in 1911 by the late Walter Burley Griffin, Townplanner from Chicago. It has grown in less than three decades into a flourishing city.





THE FEDERAL PARLIAMENT, CANBERRA—Capital of the Commonwealth of Australia.





Although I had reached Canberra—pronounced Canbra—by a very comfortable railway journey from Sydney, a friend, who was then the Minister of Health in the Federal Government, told me its romantic story long before I was able to visit this beautifully laid-out but still unfinished city. There can be little doubt that the Government of the Commonwealth, having once decided upon the necessity for a “Territory,” independent for local administration of all the other States, made a wise choice, from every angle, by selecting the present site. Easy of access from the two rival million-peopled cities of Melbourne and Sydney; raised sufficiently above sea level to obtain a cooling summer breeze and, for Australia, a fairly sure rainfall, it is close to the sheltered inlet of Jervis Bay, and is connected by a separate coastal railway with Sydney; while in the opposite, or southerly direction, there is the winter sport centre of Kosciuszko. The nearby coastal waters around Montagu Island are a paradise for the big-game fisherman. The Naval Academy, once situated at Jervis Bay, is now at Flinders, in the State of Victoria.

The name “Canberra” is of Australian native origin and can be translated as the “Meeting Place.” For many hundreds of years aborigines hunted and held corroborees on the limestone plains of this district, but they moved away soon after the white man made his appearance in growing numbers during the years from 1820 onwards. The people of the young colony wanted well-watered agricultural and, especially, pastoral lands. In the thirties of last century came the great pastoral expansion. Landowners made their homes on these rising plains, many of them obtaining free grants of land, for services rendered to the colony. These first settlers chose the river frontages, the plain, untimbered country. The small settler, who came to the Canberra Valley in the 'sixties, had to take either broken or mountainous country, alternatively to odd acres of land left between the blocks of large owners. From this time onwards these uplands developed slowly but steadily until they became Federal territory on the 1st January, 1911.

Opposite—Above, a Koala Bear—Below, A Tiger, or man-eating shark.

The choice of the site was largely the outcome of intense inter-state rivalry between New South Wales and Victoria. Finally, New South Wales agreed to transfer to the Government of the Commonwealth an area of 930 square miles. Competitive designs were invited from architects throughout the world for the construction of the city. Out of the one hundred and thirty-seven plans submitted, the entry of the late Walter Burley Griffin, of Chicago, was chosen because of its simplicity, distinction and originality. Skilful use was made of the topographical features of the twelve square miles set aside for Australia's capital. Full advantage was taken of the towering background of a stretch of the Australian Alps, while closer mountains, hills and spurs, contributed to fine vistas in almost every direction. The Molonglo River and its valley traverse the site, and made possible the construction of a chain of ornamental lakes in the centre of the city.

On 9th May, 1927, the Duke and Duchess of York, now King George VI and Queen Elizabeth, opened the first Parliament, which had been moved from Melbourne. At this time Canberra was a national capital only in name and dignity. There were few roads, or made footpaths, the buildings were new and therefore somewhat bare in appearance. The trees—now one of the city's most beautiful possessions—were small saplings. Since then, and the second Royal visit, Canberra will have grown into a flourishing city, with a steadily growing population of over fifteen thousand.

To get a mental picture of Australia's capital, all ideas about main thoroughfares seething with activity, towering buildings and other usual features of a city, must be discarded. Canberra has no main street. Nor has it any skyscraping buildings. Three storeys are the highest, and there are only three of these buildings—Parliament House and two nearby departmental secretariats. Perhaps the best way to visualise the layout of the national capital is to imagine a circle with Capital Hill as its axis, keeping in mind that Canberra is deliberately planned to expand inwards towards the centre and not outwards

like most cities. Around the rim of the circle are the suburbs and the three shopping centres. These stretch mainly north and south of the central area, where the provisional Houses of Parliament are situated, near Capital Hill. The permanent Parliament House will be built eventually on Capital Hill, but the present building is designed to accommodate Parliament for up to one hundred years.

All main avenues radiate from this Capital Hill. In the central area, there are no shops, no private homes. It is reserved for all time for public buildings and parks and gardens. At present there are only ten to a dozen public buildings around Parliament House. The rest of the area is covered by tree plantations, lawns, golf links and reserves. Sheep still graze on parts of the central area. The city has no manufacturing industries. The surrounding countryside is used for wool growing, dairying, and wheat-growing, just as it was before the national capital was set up. There is plenty of water, electricity for light and heating, but gas has not been introduced.

Fences are rare. Nearly all private houses are fronted with hedges. There are few billboards, posters or other advertising signs. The residential suburbs are noted for their neat gardens. A variety of trees from many lands have been planted. There are English oaks, elms and beeches, North American firs, birches and pines, cypresses from the Mediterranean mingle with Australian gums and wattles. The shrubs and trees are numbered by the million—two and half million is, I should think, a conservative estimate.

About four miles from the Parliament buildings and set in most beautiful surroundings is Yarralumla, an historic sheep station, which was taken over by the Commonwealth Government in 1913, and the fine converted old homestead has become the official residence of His Excellency the Governor General.

Canberra has a great and glorious destiny, the capital of a world power with a whole continent to itself ; but, at present, Australians speak of it with a curious mixture

of pride and banter. Here is what is said about it in a fine little Sydney annual *Cities of the Sun* :

"Australia's Federal Capital is a half-grown city of embassies, legations, administrative buildings, legislative halls and wide open spaces. It is a ground plan for the City Beautiful. The ground plan is slowly filling up and rounding out from a well-regulated childhood through a sturdy adolescence to a wise maturity.

"At present, in an era of transition, it is a city of amazing contrasts. A city, if you will, of beautiful nonsense. Busy scientists and administrators look up from their concentration on the complex problems of twentieth century living and watch flocks of sheep cross concrete boulevards between handsome white buildings. Legislators and businessmen hear magpies chortling lightheartedly from ancient gum trees outside their office windows.

"To understand these strange contrasts you have to understand Canberra's origin. It is a made city. A city planned and erected by men who had a definite object in mind. It has not, like other cities, grown up as a natural extension of the needs and purposes of its environment. It has all the advantages of calculated foresight—neatness, convenience, beauty ; it lacks something of the vulgarity and crude human contact that comes from noisy trams, blatant hoardings, strident traffic and higgledy-piggledy housing. . . ."

"Griffin's design had two focal points, Capital Hill, site for a permanent Parliament House, and Civic Hill, site for a city hall and municipal administration. From roads encircling Capital and Civic Hills, avenues, crescents and circuits swerve away to shopping and community centres, residential suburbs, parks and sports fields. If you blunder into these streets unprepared, you are apt to be confused. Approach them after a study of the central plan and the jigsaw fits into a complete, appropriate and easily understood pattern.

Canberra is still the skeleton of a magnificent city, but each year adds more flesh to its bare bones. There have been three major interruptions—World War I, the

Great Depression, and World War II. Now, despite shortage of building materials, progress has been resumed and there is every indication that the worst of the city's growing pains are over. Meanwhile, the city's fifteen thousand permanent residents live amidst lovely mountain scenery, and ride smoothly to work through wide tree-lined streets.

"Canberra lies in a wide, shallow river valley, about 2,000 feet above sea level, 190 miles by road from Sydney and 419 miles from Melbourne. It is an hour's aeroplane trip from Sydney and two hours from Melbourne. The city is surrounded by hills, dominated by the high, blue, often snow-capped mountains of the Australian Alps. Alpine Club members reach snow country just over fifty miles from Canberra.

"The Molonglo River cuts from east to west across the town site and will provide water for the three lakes and two ornamental basins which are part of the original design. Building regulations control household design and construction. There is nothing crude or blatant or obviously vulgar about the balanced development of the residential area. Each suburb is planned as a self-contained unit, with shopping area and community amenities centrally situated.

"The Commonwealth Department of the Interior is Canberra's landlord. Of the two thousand houses already built, most are single-storey brick cottages of pleasant design in their own block of land. Many residents are buying their homes from the Government on favourable terms spread over thirty years. In the city, the maximum term of land lease for residential purposes is ninety-nine years. Rentals are assessed at four per cent of the unimproved capital value. The new £14,000,000 building programme provides that for each year up to 1954, £1,000,000 will be spent on housing and another £1,000,000 on collateral development work, including schools, hotels, swimming pools and other community services.

"Besides constructing and maintaining all government buildings and supervising private construction, the

Department of the Interior controls the bus transport service, water, sewerage, electricity, parks and gardens, footpaths, roads and bridges. Greatest civic achievement is the imaginative planting of 2,500,000 trees and shrubs in gardens, plantations, afforestation belts and along street borders. In Canberra, the seasons flow by on waves of colour. Canberra in the spring and Canberra in the autumn are now recognised Australian tourist attractions.

"Over five thousand of Canberra's fifteen thousand people are Commonwealth civil servants. In addition, thirty-six Senators and seventy-five members of the House of Representatives meet regularly at Parliament House to wrestle with the many problems of an expanding democracy. Diplomats from thirteen nations have set up embassies, legations and high commissioner's offices. The Governor-General lives just outside the city limits.

"Contrast remains the essence of Canberra's attraction. City sophistication mingles with rural simplicity. International conventions take place within a block or so of where Australian youths add to their pocket money by trapping rabbits or gathering mushrooms. City office workers step into tree-lined streets within sight of magnificent mountain scenery. Wage earners enjoy golf, fishing, shooting and ski-ing, sports mostly beyond the pocket of the average city dweller. All in all, Canberra is a blue print of what many Australians would like all Australian cities to become."

Adjacent to the capital, and within the Federal Territory, an up-to-date Military College has been opened.

It was before visiting Canberra that I received from Mr. Arthur Upfield this interesting account of big-game fishing off the nearby coast of New South Wales. Incidentally this sport, together with those afforded by the adjacent Alpine snows, add to the attractiveness of life, far from the hurry and noise of great cities, in the quiet, almost rural, yet stately Capital of Australia.

Deep down in the clear blue waters astern of the launch, much like opal fire beneath the surface of that gem, there appeared a long and narrow blue-brown shadow, specked with points of light. For a second or two the sea-jewel kept pace with the boat; then it flashed aside and vanished. So came and passed my first glimpse of a swordfish in these amazing waters near Bermagui, which has become a favourite centre for big-game fishing in the Pacific.

I liked the look of the launch, with its two swivel fishing chairs. It had a lifeboat appearance, an unsinkable look about it. And I liked the look of Taylor, the boatman, too; quiet, deliberate and knowledgeable. It would take a hefty sea to capsize the craft, and a bad blow to excite its owner. Morning had broken brilliantly clear, a moderate south-easterly promising to keep down the temperature. We passed over the river-bar at eight o'clock, and at once let out astern jag-lines with feathered hooks—with which to troll for bait-fish.

Several launches were out ahead of us, all trolling for bait. We caught nothing while in the waters of the inner bay; but, having rounded the main headland, and riding the full ocean swell, both Taylor and I hooked a fish at the same moment. We had passed over the surface shoal before we could again get the hooks overboard, and the boat was swung round to bring us over the shoal once more. Again both hooked a fish at the same instant, and, two minutes later, we both caught a bonito at the same time. Salmon, bonito, kingfish—all are found in shoals about this rocky headland, and jag-lines have only to be passed through them to reap a quick and rich harvest of bait.

Already the heavy rod, with its giant steel reel, containing nine hundred yards of cord-line, was rigged and in position. One of the bonito, weighing about a pound, was skewered to the large hook attached to twenty feet of wire trace, which in turn was fastened to the end of the cord-line. The bait was passed over the stern of the launch, now throttled down to four knots, and allowed to troll some twenty to thirty feet distant. At first the

bait-fish behaved erratically, plunging beneath the surface and then jumping above it; but, after some trouble, Taylor made it skim the surface like a hydro-plane. From the extremity of poles thrust outward to port and starboard, light ropes trolled brightly coloured cylinders of wood, called "teasers." Thus, to a fish deep in the remarkably clear water, the two teasers and the bait-fish would appear to be a small shoal playfully following the launch.

The angler's business is to sit his bucket-seat, astride the rod, with body-harness to hand and ready to be pulled on and attached to the reel. Gloves must also be available for his hands, which are likely to be burned by a racing line if not protected. Thereafter it is up to him to watch his bait-fish and that quarter of the sea astern of the boat, leaving the two launchmen to keep a look-out ahead and abeam for a fin.

In this way the stage is set for a fight with a swordfish or shark, a fight between a frail man armed with a cane-rod and a cord-line—no stronger than one I have broken when attempting to land a twenty-pound snapper—and a fish weighing anything from a hundred to a thousand pounds. The record swordfish at the end of one season weighed 672 pounds. It will be a fight in which the odds are very much in favour of the fish, more especially the swordfish, which is far more difficult to bring to the gaff than any shark.

We trolled up to Montague Island, north of Bermagui, and about five miles off the coast. The comparative shallows about Montague Island are spawning grounds for the small fish. So, to them come the huge shoals of tuna, snapper and sea-salmon. After these come the sharks, the tiger, the grey nurse, the thresher, the mako, and the hammerhead. About Christmas time there appear the several species of swordfish, to remain till the end of March. They come down from the north-east. When a swordfish is hooked, *it invariably dashes away to the north-east and to no other point of the compass.*

We were less than a mile from Montague Island when a great fish appeared.



Above : ON BOARD THE CLIPPER "MACQUARIE " 1875

Below : LORD HOWE ISLAND. About 300 miles seawards from Port Macquarie,
N.S.W.





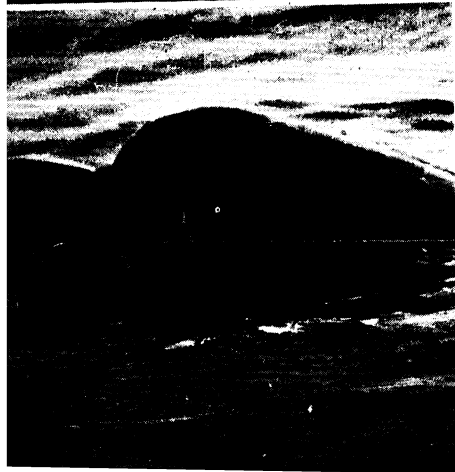
Above : The Residence of H.E. the Governor-General of the Commonwealth of Australia

Below : Light and shade, Blue Mountains, New South Wales.





Amateur skiers in a Canadian winter scene.



"A shark! Here he comes!" I shouted.

"It's a swordfish, not a shark," Taylor cried joyously. "Remember what I told you, now."

A dozen yards behind the skimming bait-fish had appeared a dorsal fin, slate-grey in colour, stream-lined like a knife. The bait-fish seemed to make a spurt, as though alive and sensing its danger. My scalp tingled, and my mind flogged itself to remember all the advice I had been given. I was sickened by the thought that I might make a foolish mistake at this crucial moment. With incredible speed the fin cut across the water towards the bait-fish. It came alongside the bait without deflecting it. I was conscious that the teasers had disappeared, having been pulled aboard by Taylor or his assistant. The fin dropped back from the bait-fish and I wanted to yell my disappointment.

Blindly I clipped the harness to the steel reel and then slipped on the gloves. Farther back dropped the fin—a yard, two, three yards. And then on it came once more, like a greyhound after a hare. There was something dreadfully inevitable about it. Swiftly it drew to one side and a little behind the bait-fish, and then over the bait-fish lifted a blue-brown blade. For a second it hovered thus, and then the sword smashed into the water beside the bait-fish as the whitish throat of the "Swordie" turned outward and the gummy jaws closed about the bait. There was a flurry of water, and the line raced away out of the reel with a long, high-pitched scream.

At once the launch engine was slipped into neutral. Abruptly the scream of the reel stopped. I began to count. One, two, three, four, five—the "swordie" had turned the bait-fish in its jaws, down there in the deep, in order to swallow it head first. Six, seven, eight, nine—now it was chewing the bait-fish before swallowing. Soon I must strike. How I had resisted the temptation of striking when the swordfish had first taken the bait, I do not know. I account myself a man of iron on this score. To have done so would merely have dragged bait and hook clear of the gummy mouth pressed about it.

Ten, eleven, twelve—the line went slack. The fish had felt the hook or the wire-trace in the act of masticating and, abruptly suspicious, was about to come up at express speed, to leap above water in the attempt to throw out this strange food.

Now was the moment. Madly I reeled in the slack of the line. Then, with a wide backward sweep of the rod-tip, I struck, and felt the tug of the fish's weight on the line. For a period of one second the reel screamed despite all I could do to brake it. Again the line running out beyond me, went slack. Then, out of the ocean sprang the fish to hover for what appeared an age in mid-air before falling back with a mighty splash.

"You've got him!" shouted the exultant second hand.

"Fight him," urged Taylor. "Feel him! Feel him!"

Feel him. I could *feel* him all right. Inexperienced as I was, I was in agony when watching the bend of the rod, which I had been able to arch myself only by exerting all my power on it. I was in agony too, about the taut line. Did I have the reel-brake on too hard? Would it snap the line at some weak point and lose me my fish? Out went the line, two, three, four hundred yards, much more than I should have allowed to escape from the reel, before the marlin stopped. Now began my proper job. Bringing the tip of the rod as high over my head as I could raise it, I let it fall almost to the sea and at the same time reeled hard on the temporary slack thus gained. And so it went on—up with the rod-tip, then down again and reel-in hard. Thus I gained about a hundred yards of line. Then the fish objected, and made off for fifty yards. It was tough going, but presently I became more confident and more dexterous with the rod and line, permitting my fish to get back only a yard of line for every two I gained on it.

"He's tiring," Taylor said with intense satisfaction. "So he should be; he's been on for forty minutes."

Forty minutes? Surely for thirty-five minutes, time had stopped! It could have been only five minutes back that I had counted to twelve before striking.

I could still *feel* him. The fish was fast becoming tired ; it came easier to my soft glove and steel-reel persuasion. It could have been only a little more tired than I was ; but I was exultant, although ready to drop to the floorboards of the launch, for I knew that, barring atrocious ill-luck, I should win this battle. Half of the nine hundred yards of Australian-made cord had been tested most severely and found to be faultless. One flaw in that first four hundred and fifty yards would have cost me my fish—and broken my heart !

Against the reel-brake now I was losing no line. The *feel* of the giant fish had altered from ferocious strength to lethargic weight. Up from the surging water came the shining brass swivel joining the cord-line to the twenty yards of wire trace. So the fish was only sixty feet below surface.

"There he is!" shouted the launchmen, almost simultaneously.

They were standing ready to take their legitimate part—one with the gaff, the other with a rope to noose the catch. I was, of course, still glued to the bucket-seat, and, being lower than they, saw nothing until the water boiled and the fish made its last throw of the dice. I simply had to let it take a dozen yards of the line in my anxiety lest the cord might break beneath the terrific strain. I was able then to draw in the fish to the side of the boat and reel hard while so doing.

Five minutes later, my black-marlin swordfish lay lashed across the stern of the launch, and I was gazing at the masthead from which fluttered the blue flag of conquest.

Taylor and his mate were bubbling with satisfaction. My arms felt like lead, and pain was shooting between my shoulders and down my back. I was mentally dazed, not so much by fatigue as by astonishment that I had been fighting that monster of the sea for fifty-five minutes and that I had actually brought it to the gaff. And all that without having any previous experience of fishing save that of trout fishing with rod and line, and shark-fishing with a half-inch rope.

With the blue flag still fluttering at the masthead, we reached Bermagui jetty. Willing hands hauled the fish up to the hoist, where the secretary of the angling club later announced its weight as 223 lbs., "quite a nice weight for a black marlin," its length was 10 ft. 1 in., and its girth, 3 ft. 9 in.

Although still in its infancy, big-game fishing in the waters of New South Wales has become world famous in quite recent years. This sport began to develop in 1933, when the first marlin, or swordfish, was landed off Bermagui. Many world records are now held by anglers in these seas. It is interesting to note that, after a season's fishing off the coast of New South Wales, Zane Grey wrote: "... Australia will yield the most incredible and magnificent big-game fish of known and unknown species that the fishing world has ever recorded."

Among the records for game fish, including sharks, caught on regulation tackle are: a black swordfish weighing 680 lbs.; a striped swordfish weighing 330 lbs.; a marko shark, 690 lbs.; a tiger shark of 1,382 lbs., and a hammerhead shark weighing 565 lbs. In addition to big game fish these waters of New South Wales abound with medium and light fighting fish, such as tuna, kingfish, bonito and Australian salmon, which, incidentally, is one of the gamest of them all.

Chapter 6

BRISBANE : GATEWAY TO TROPICAL QUEENSLAND

I WAS glad to have done the wrong thing when finally leaving Sydney. Everyone told me to go south and see the highly developed and more thickly populated State of Victoria, with its capital, Melbourne, second largest city in Australia. "It is less American and has more atmosphere," they urged, but added, hastily, as a loyal afterthought, "although, of course, its climate is far more changeable than that of Sydney."

There is so much hospitality and kindness wherever one goes in Australia that I did not like to tell them that I had not come to this immense continent to spend all my time in its cities and playgrounds; although every one of them, as I afterwards discovered, has plenty of atmosphere which is peculiarly its own; and what delighted me even more was, that wherever the pavements ended there commenced the sunny, open-air life of the real Australia. Sea, river, club, golf, and riding, work in the mines, on the plantations, in the wheat lands, pearl fisheries, cattle ranches, all this and much more was the Australia I had come to see and to study. And so one day, after a pleasant sea voyage northwards of six hundred miles along the coast, I found myself in Brisbane, the capital of Queensland.

The voyage was a sail over summer seas, although the waters hereabouts are not protected from the Pacific rollers by the Great Barrier Reef, as they are a little farther north. This city is tropical, and spreads itself along both banks of the Brisbane River at a distance of about eighteen miles from the sea. In an amphitheatre of greenish-blue hills, this well-built and garden-like town of some 300 thousand inhabitants, possesses all the amenities of a modern metropolis—and something more besides. Its climate is perennially bright and

sunny. One of the things I noticed most in Brisbane were the smiling happy faces of the passers-by, which seemed to reflect the sunny nature of the scene around and to contrast with the dull, lifeless, bored or worried appearance of so many thousands of the people one meets in the great cities of Europe and America.

Within a few days of arrival in this city I began to feel the strange attraction of Queensland. One evening while lounging in the little cockpit of a yacht sailing up the Brisbane River from its two miles wide mouth in Moreton Bay, the moonlight tingeing the waters and the sails with silver light, a sandy spit on my right hand jutting out into the dancing waves, palms and little white houses silhouetted against the darker green of the undergrowth, and the soft warm breeze of the sub-tropical night, completed my downfall. There and then I made up my mind to remain some time in Queensland—the “some” tacitly expressing a period sufficiently long to visit the Great Barrier Reef, Thursday Island, the pearl fisheries, and also to see something of life in the outback of this great state of North-Eastern Australia.

One of the finest views around the Queensland capital is the ocean approach across the blue waters of Moreton Bay. The sea here is studded with green-clad islands and the shores are fringed with yellow sunlit beaches, behind which there are so many bungalow residences embowered in trees that Brisbane, and its suburbs facing the Pacific, has been called “The Villa City.” One of the orthodox things to do when visiting Brisbane for the first time is to go to One Tree Hill, Highgate Hill, or other vantage point, and look round at the panorama of white roofs and green trees spread out ridiculously far over the undulating ground for a city of this size—at least, it appears ridiculous to occupy such a space with a city of less than half a million people, until one has become accustomed to the vast distances of Australia.

I did not start off to explore the 170 miles of streets forming modern Brisbane, where many-storeyed stone buildings stand up like granite towers above low roofs of corrugated iron and large patches of misty green trees.

It has always seemed to me a waste of time to spend more than a few odd hours in the busy streets of typically Western cities, which so closely resemble each other that I have, on occasions, momentarily forgotten in which town and country I have been walking! Besides, the weather was altogether too perfect to spend the sunny hours where only those remained who were compelled to do so by their business. After wandering through the Botanical Gardens, where the palms and flowers are delightful, I motored over thirteen miles of good road to Sandgate, a little bathing resort facing Moreton Bay. Here all Brisbane, both young and old, lives the amphibious life. One thing I noticed that this city possesses in common with other Australian capitals—well-dressed women in light and flowing garments, while the mere male walks abroad in an ordinary sober suit of thin tweed. Even in semi-tropical Brisbane and its surroundings there were few who were garbed in the white drill or palm-beach suits to which I had become accustomed in the East.

The British Isles have but a fifth of the territorial area of Queensland, which consists of 670,500 square miles, with a coast line of over 2,300 miles. The population of this enormous country averages only two per square mile (about 1,106,269), and government statistics give the number of people which Queensland could easily support at the high figure of 50,000,000; thus there is room in this one State of the Commonwealth for many millions of British emigrants.

Topographically as well as climatically Queensland is divided into two distinct portions. The Dividing Range, which maintains its northerly trend from New South Wales, crosses this State to the Cape York Peninsula in the extreme north of the continent, and gives the coastlands and hillsides a considerable rainfall. On the east the sea-breeze tempers the heat. North Queensland lies within the tropics, and has a climate in accordance with its position.

Many ridges supplementary to the chain composing the Dividing Range give the whole coast a mountainous aspect, but most of these are low hills covered with forests and rich agricultural and pastoral lands.

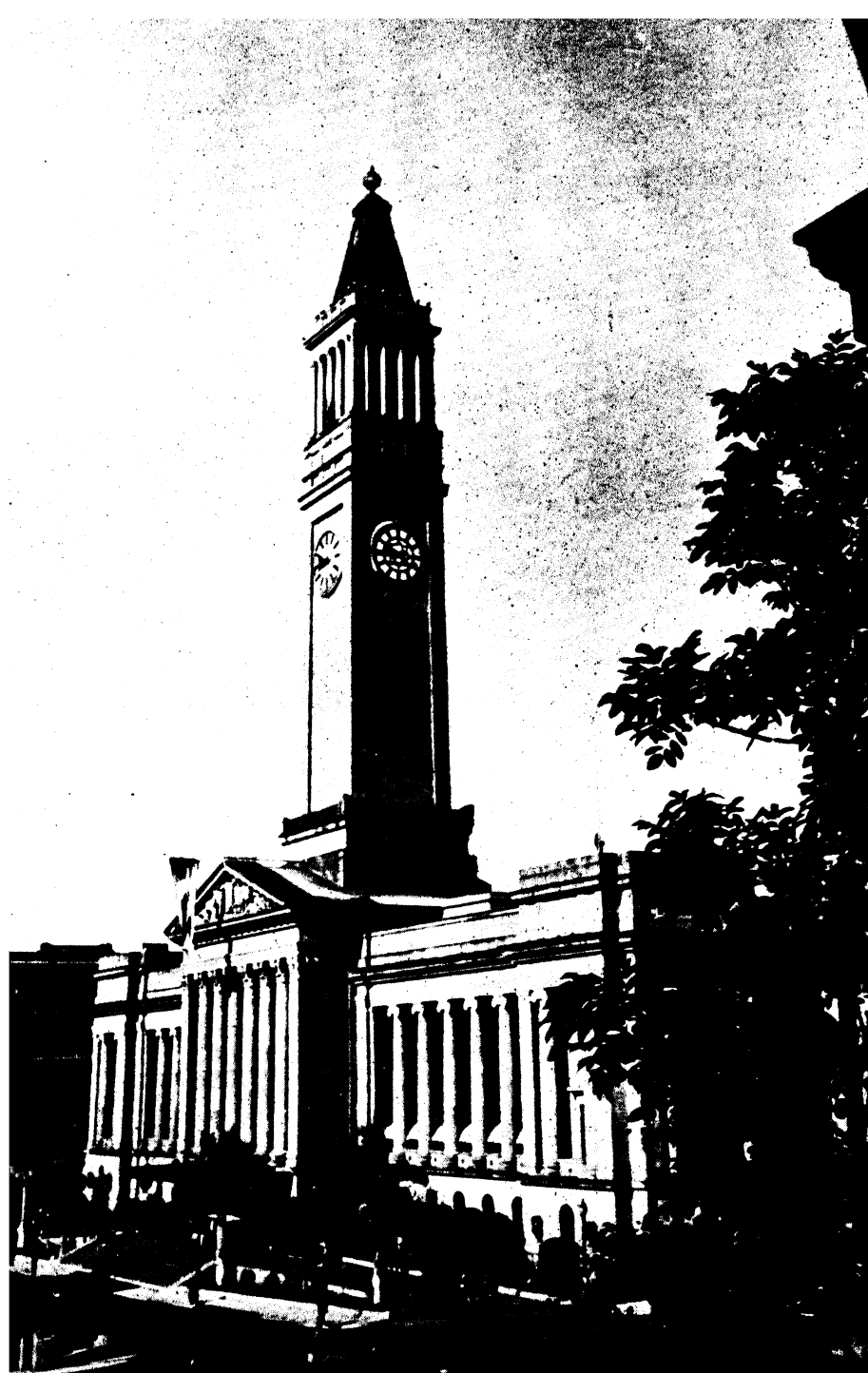
The western portion of the State, beyond the mountains, is occupied by undulating downs with occasional clumps of trees, and, in common with the whole interior of Australia, has the drawback of an uncertain rainfall. The climate of these vast plains is decidedly tropical but, the atmosphere being dry, owing to the absence of forests, is much more healthy than the equatorial portions of Africa and South America. In fact the death rate in Queensland is only nine or ten per thousand, whereas in Sweden, which is generally accepted as the European average, it is over eighteen per thousand.

The most fertile portion of Queensland lies on the western slopes of the coast range in the south of the State, and is known as the "Darling Downs." The area of this region, which contains some of the finest soil in the world, is over four million acres; and the production of grain averages well over one million bushels a year. On the wheat-lands, just before the harvest, golden corn stretches like a rippling yellow sea all around the numerous homesteads, which have a look of comfortable prosperity. Here, barley, lucerne, wheat and maize grow luxuriantly, and dairying is largely carried on. The Darling Downs are undoubtedly the richest agricultural region in the whole of Australia. To thoroughly appreciate these fertile slopes one must have sweated on the "Great Sandy Desert," wandered for days in the Australian bush, or ridden, dust-choked and parched, across the waterless plains of the tropical interior.

The coast lands are generally fertile and well suited for all kinds of farming, but over half the area of this portion of the country is covered with forests of cedar, pine and other useful woods, and the rainfall in many parts exceeds sixty inches in the year. Among the agricultural activities of this State must be mentioned the cultivation of maize, and in the north, of sugar cane.

The mining fields of Queensland, which is immensely rich in minerals and precious stones, already cover a total area of over fifty million acres, although much of the more remote interior still awaits geological examination. The value of the gold already produced may be

Opposite—Brisbane's City Hall.





BRISBANE, CAPITAL OF QUEENSLAND

VIEW OVER BRISBANE







estimated at over one hundred millions sterling, and that of other metals at fifty-five millions sterling.

The chief goldfields are at Charters Towers, ninety-three miles from the port of Townsville, on the Queensland Northern Railway ; Gympie, one hundred and seven miles north of Brisbane, to which it is connected by railway ; Mount Morgan, one of Australia's richest gold mines, situated just over twenty-six miles south-west of Rockhampton ; and the Cape Field, west of the Coast Range. The most productive copper districts are the Cloncurry Field, near Townsville, and the Star River region. Tin in considerable quantities is obtained from the Walsh and Tinaroo Fields in the north of the State. Coal is mined on the Borrum Field, near Maryborough, at Blair Athol, in Central Queensland where open cast mining is being developed, and around Ipswich, the capital of West Moreton and a growing city of over thirty thousand inhabitants. Opals and sapphires are found all over Western Queensland, especially on the Auakie Fields.

Thursday Island, off Cape York, is the headquarters of the pearl fisheries, which are largely carried on in the Torres Strait and around the coast of Papua and the adjacent Pacific Islands. The average value of pearl shell annually exported in the last years for which statistics are available, averages approximately £72,000. *Bêche-de-mer*, or sea slug fishing forms an important industry of the North Queensland coast, and the catches are sent to China where certain species fetch a fabulous price as table delicacies. The headquarters of the oyster and *bêche-de-mer* fisheries are at Cooktown.

The most important industry of this State is sheep and cattle breeding, which is conducted on a very large scale. The vast plains, west of the Dividing Range, are especially suitable for sheep-raising, as pastoral land in certain parts can be rented at a very low rate. There are in Queensland millions of cattle, sheep and horses. Many of the stations owned by private persons or public companies are larger than an English county.

The cultivation of all kinds of tropical and temperate

fruits is greatly on the increase. In the north bananas and pineapples are grown in sufficient quantities to make their export an important asset, and the production of grapes in the districts around Brisbane, Maryborough and Gatton, where the government has an experimental and training farm, is very large.

The isle-dotted Moreton Bay, a pretty sheet of blue water surrounded by low, verdure-clad hills, forms the approach to Brisbane, the capital of Queensland. Ocean steamers have been able, since the deepening of the bar, to proceed right up to the city and moor alongside the wharves and warehouses which line the river banks for several miles.

Brisbane forms the outlet for the produce of the fertile coast lands of south Queensland, and the coalfields around Ipswich, which stands a few miles further upstream. Although some of the produce from the Darling Downs, lying on the west of the Dividing Range, filters across the New South Wales border, the principal portion of the exports from this region also finds its way to this port for shipment.

The growth of Brisbane has been slow but sure. No gold rush or other human phenomenon has contributed largely to the population of this city or the surrounding country; nevertheless it has steadily risen on the solid foundations of agricultural prosperity, maritime accessibility, and proximity of coalfields. Seventy years ago the population numbered only about five thousand, and to-day the city, which is divided into two municipalities, occupies an area of many square miles.

The chief coast ports in the north are: Rockhampton, on the Fitzroy River, a thoroughly modern town with a fine natural harbour; Bowen, Mackay and Townsville, in Cleveland Bay, important outlets for the sugar-growing and mining districts; Cairns and Cooktown, the northernmost ports with the exception of Thursday Island. In the south are the seaports of Maryborough, which is connected by railway with the Gympie goldfields and the Borrum coal mines; and Bundaberg and Gladstone, which are principally agricultural centres.

Toowoomba, the capital of the Darling Downs, is the most prosperous agricultural town in Queensland. Ruthven Street, which is the main thoroughfare, presents a lively scene from sunrise to sunset, and the buildings are of massive architecture, which cannot be said of all the inland towns in Australia. Warwick is the only other important town on the Darling Downs. The centres of the pastoral industry in the west are Roma, Charleville and Richmond. Oil has been discovered near the first of these three towns.

The total area of Queensland in acres is 429,120,000, of which between 600,000 and 1,750,000 acres are actually under cultivation, and over 300,000 acres are being used for grazing and pastoral purposes generally. Many millions of acres of good land are still available for settlement.

One of the most important industries of Queensland is the cultivation of sugar-cane. The average annual yield is over four million tons of sugar; and large bounties have in the past been paid by the Federal Government on cane grown entirely by white labour. The principal sugar-growing areas are in the Wide Bay and Burnett districts. An interesting development of quite recent years is the cultivation of cotton, and the Government at first guaranteed the growers a fixed price.

The coast of Queensland is protected some 10 to 150 miles from the shore by the Great Barrier Reef, which runs parallel with the coast for over 1,000 miles, and affords a protected channel for ocean-going as well as for coasting vessels.

The climate of Queensland provides the most perfect winter season in the world. It is far superior to the French Riviera. The Spring commences in September, and the Summer ends in February. November, December, January and February are the hot months.

Broadly speaking, there are three climates :

- (1) The coastal climate, marked by comparative evenness of temperature and a high degree of moisture.
- (2) The western climate, which is characterised by a

wide range of temperature between summer heat and winter cold.

(3) The far interior climate, with the heat of summer and the cold of winter of a more intense kind, and also with great extremes of moisture, but a general tendency to extreme dryness of atmosphere. This climate prevails in the far south-west, west and north-west of Queensland. In Brisbane the monthly mean shade temperature ranges from 77.1 deg. F. in January to 58.0 deg. F. in July.

The mean annual rainfall varies considerably. Along the Pacific slope it runs approximately from 48 in. at Brisbane to 150 in. in the far north. West of the great dividing range the rainfall diminishes from 30 in. to about 10 in., according to the distance from the main range. The country is also occasionally visited by droughts. Railway extension is every year rendering losses less severe from this cause by enabling stock to be trucked to relief country. The recuperative nature of the land is wonderful. A week after rain the dry areas are clothed with waving grasses.

Although even in the arid belts of the interior, the cultivation of certain commodities is by no means impossible, and it is a lucrative business to rear large herds of cattle and flocks of sheep, which do not suffer much from the drought if the locality is carefully chosen, and adequate provision made to tide over this period; at present, population and industry only fringe the enormous coast-line, which is swept by cool breezes and blessed with a fair rainfall.

The condition of the interior is, however, being rapidly changed by the introduction all over the country, of artificial methods of irrigation. In Queensland, alone, considerably over 700,000,000 gallons of water are daily obtained from artesian wells, and fresh borings are constantly being made. There are also big schemes in varying stages of maturity for the employment of reservoirs, canals, barrages and other extensive irrigation works, which are all that is needed (except population) to make what is now fallow land highly productive and revenue-producing territory.

Chapter 7

LAND OF COLOUR AND ROMANCE

A REALLY large scale map or chart can be a very fascinating thing to the person with an urge to travel, or to explore, and who possesses, also, an imaginative mind. One day in Brisbane I sat surrounded by notes, books, and a map on which there were such fascinating references as "Cape Tribulation," "Magnetic Island," "Endeavour River," "S. Direction Is," "Whitsunday Is," "Sir C. Hardy Is," "Duyfhen Pt," "Croydon Gold Field," "Woolgar Gold Field," "Cape River Gold Field," "Ft. Cooper," "Donnybrook," and "Osprey Reef." Every name conjuring history, the ships of old days, exploration, romance, and endeavour. It was all there on the survey sheets of Queensland, a country into which the whole of Southern Europe could be placed without exceeding its overall area.

Tormented by the desire to go all ways at once, as on the 'magic carpet,' it was Randolph Bedford's definition of heaven which decided me. "This is north-east Australia between May and September—the Queensland coast for a thousand miles within the Barrier Reef—that coral wonder of the world—in the so-called winter. I have gloated over its memories in the bitter middle of the year in Melbourne, and in the end have rushed away from mere duty to its romance; and last January in Glasgow, the smell of the northern sea, the colour of the great reef, the opulence of the northern jungles were so tangibly present that my home-sickness broke out in verse at least once a week, seeing instead of the chimney stacks of south Melbourne the mighty cedars of the Barron rising through the creepers of the jungle; and to my ears the reverberance of the Broomilean drowned by the thunders of the reef. From Broadsound to Cape York the days and nights, the sea and sky, the happy land, the ship that rarely rocks its keel an inch and never

closes its ports for a thousand miles and more, are all expressions of tangible romance and of visible enchantment. The scented breath of a bush fire from the land, the tropic aroma of the tide-barred reef mingled with the odours of towns that seem to be made of pineapples ; distant reefs lying in the sealike shadows, the mountains of the main blue in the distance, the lazy inner sea lapping 1,300 miles of cay and coral, the waters shining like a taut bowstring under the sun, and by night a silver place that bears the ship as placid as a resting gull. The coast is full of the romance of effort and endurance. Cook and his coral-plugged and leaky ship beaching in Endeavour River after the anxious days of Cape Tribulation ; Bligh and his boat of the *Bounty* ; great Matthew Flinders, and Lizzie Watson, who agonised on a waterless cay and saw her child die before death mercifully came to herself, and so I sailed north in a quite comfortable coasting steamer to Townsville and Cairns, and to one of the great wonders of the world.

The voyage along the Queensland coast is through the usually calm waters between the mainland and the Great Barrier Reef. It is full of interest and there can scarcely be a more delightful ocean cruising ground anywhere in tropical seas. In summer the south-east trade winds temper the heat of the sun and give to the sugar-cane fields, which extend northwards for nearly 700 miles, a rainfall of up to 180 inches a year. Just before reaching Rockhampton the inshore waters are dotted with vivid green tree-covered islands, which throw olive-shadows on the blue sunlit waters. Mount Morgan lies some forty to fifty miles inland, and this so called " Mountain of Gold " is therefore not visible from the sea coast.

When a little over eight hundred miles north of Brisbane we steamed slowly past Magnetic Island—a favourite pleasure resort—into Cleveland Bay and the fine harbour of Townsville, perhaps the best centre for a visit to the great reef.

It must not be imagined that these seaports of the Queensland coast are devoid of the amenities of civilisation. At Townsville, for example, there is a fine

aerodrome and the flying-boats from England as well as the land planes of the Australian air network make this town a port of call. A walk in the cool of the evening along the Strand sea-road, beneath the tall palms, to watch a yellow moon sail low over the distant Barrier Reef, as the night orb obligingly did for me, is something to remember.

As I looked at a flying-boat anchored for the night in this natural harbour of the Antipodes, it seemed impossible to believe that some at least of its passengers who had come ashore sightseeing, and to stay at one or other of the really good hotels along the Strand, were walking about in England, over 12,000 miles away, and seemingly very remote, less than a week ago. Then I discovered that it was quite possible to sit in my room at the hotel and talk to friends in London. Yes, the world has certainly shrunk in size, but the *bitter-sweet feeling of remoteness still remained* to tinge with romance the beauty of that tropical night down under.

Townsville, which I had expected to be a very hot and primitive little town of the outback type, turned out to be quite an important place and a *pleasure resort*, although its "creek" is said to be so full of sharks that no one has ever entered its waters and come out alive. However this may be, shark fishing certainly affords exciting sport hereabouts. The principal shopping street is broad, well-paved and lined with palms, flowers and foliage, and concrete archways of Moorish design shade the buildings on both sides.

It was just outside Townsville that I saw a large sugar estate. The bungalow of the proprietor was a most comfortable building and from it stretched away acres of nine-feet-high, broad, green-leaved sugar-canes. The stems varied from three to six inches in circumference, and when one had been cut down I was asked to pick it up. The weight of this one cane was astonishing and I was shown a pile of miniature railway metals, track-wheels and sleepers, which were temporarily laid down through the plantation when cutting was in progress. Along this improvised railway an oil-driven engine

drew the laden trucks to the crushing mills. I was told that although good sugar land could be obtained for three pounds an acre, the cost of clearing and planting was over ten times this amount.

Newcomers to Queensland seldom realise how far the Great Barrier Reef is from the coast; and unless they have first taken the trouble to read something about this world-wonder they are amazed, as I was, to find many of the islands of this largely submerged reef are really the peaks of volcanic mountains. It is, in fact, these green cones, rising from the light-filled blues of the coral-bound sea, which give to the 62,000 square miles of the Great Barrier Reef its unique beauty. The flat coral cays are submerged at high tide and thousands of reefs are only visible at L.W.O. Spring tides. Beginning in the south, at Fraser Island, with the Swaine Reefs off Rockhampton, just over 300 miles north of Brisbane, the Great Barrier extends northwards for over 1,200 miles to the Torres Strait.

The distance from the Australian coast to the main reef varies from 154 miles in the south to 18 miles at Cairns and to only 10 miles from Cape Flattery to S. Direction Island, in Latitude 15 degrees South. All this I learned from the captain of the steamer that was taking me north to Cairns. It did not afford me much consolation, however, because I began to realise that my chances of seeing the reef itself depended upon such a variety of climatic conditions and circumstances of transport that all I was really sure of observing was an amazing labyrinth of deeps and shallows, varying in colour from purple-blue to light apple-green, intersected by grey patches of dead coral, relieved, however, by beautiful tropical islets, covered to their summits with the green of palm fronds and undergrowth.

This I saw from an aeroplane. And it stretched all around as far as the horizon. In a way it was as alarming as a flight over the Polar ice. There would be little chance of rescue for anyone marooned on one of these islands, or reefs, in the midst of a desolate waste of blue sea, white foam and grey and green coral, joining,

Opposite—Magnetic Island, Great Barrier Reef.









CROSSING A RIVER IN QUEENSLAND



A RIVER IN THE TROPICAL NORTH



" SUNSET ON THE BRISBANE RIVER "



Above : SPENCER STREET, CAIRNS

Below : TOWNSVILLE AND ITS HARBOUR, FROM CASTLE HILL

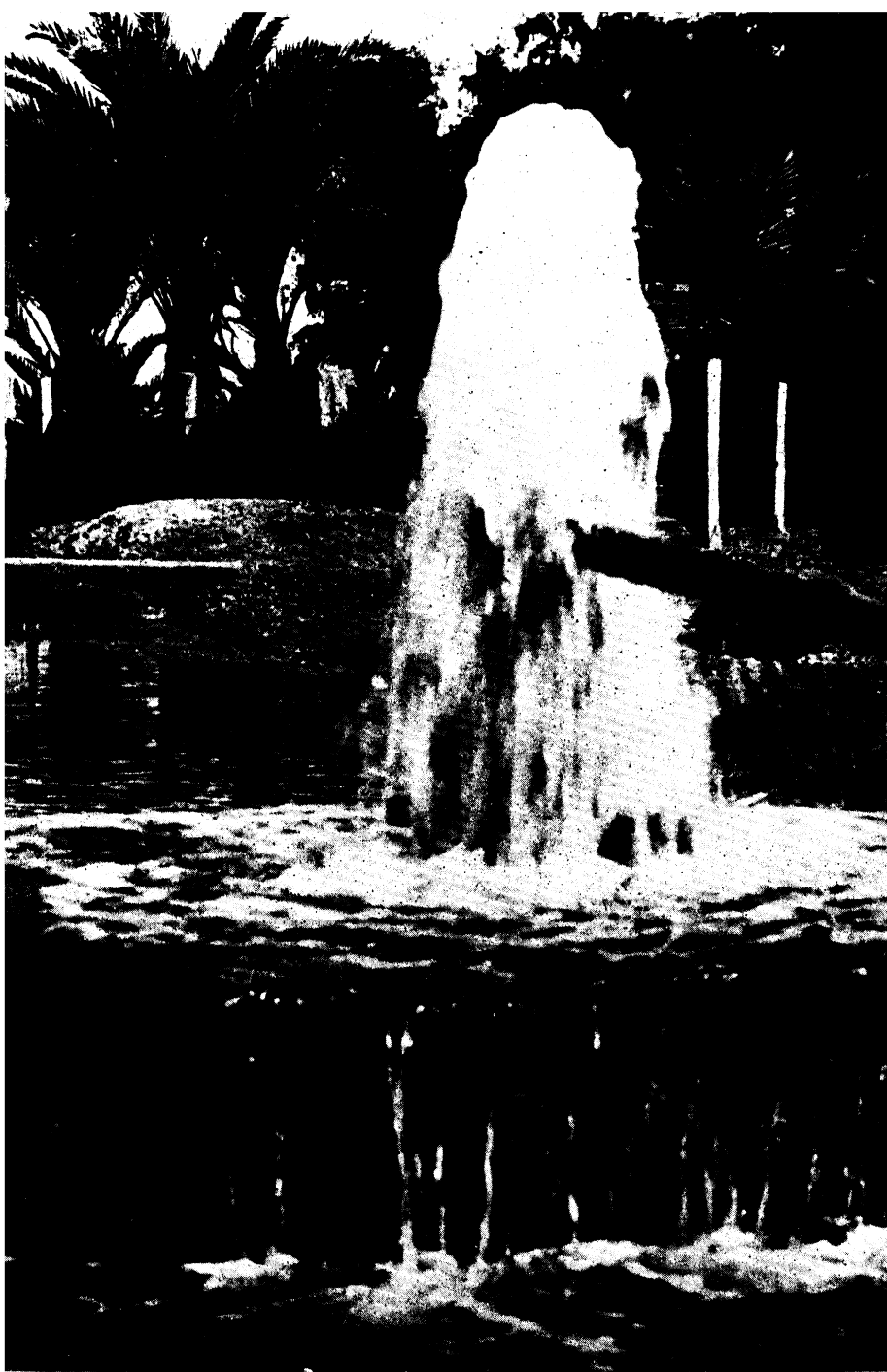




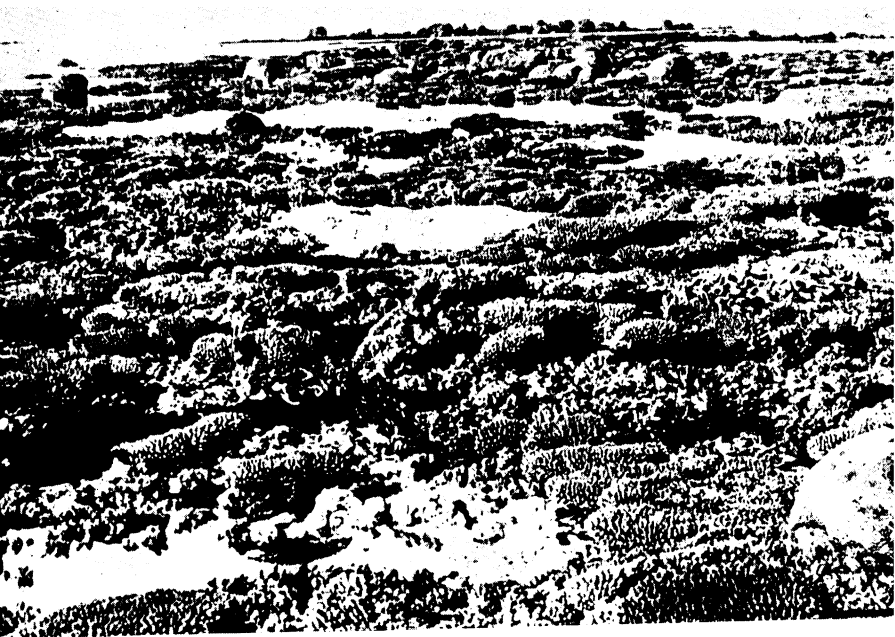
Above : COTTON PICKERS, QUEENSLAND

Below : A TOBACCO PLANTATION IN NORTH QUEENSLAND
Spraying the leaves to prevent damage by insects





AN ARTESIAN POPE, QUEENSLAND



THE BARRIER REEF AT LOW TIDE



dream-like, lonely, unnamed, untrodden, palm-clad islands, accessible only to those who spend their lives piloting little craft through the uncharted channels in their search for pearl shell, *bêche de mer*, and other of nature's products in these tropical reef-filled seas.

How many shipwrecked people have died of starvation on these inaccessible islets no one knows. Bleached skeletons have been found on the inner reefs, but the outer rim of coral, washed by the great swells of the Pacific Ocean, is seldom even approachable. On the large and lofty mountain-tops that rise above the waters there are, however, permanent and temporary dwellers who plant, fish, and explore in a world of their own.

On one such island, when passing the Northumberland Group, I saw from the bridge of the ship that was taking me south, back to Brisbane, a fire burning in the darkness of the night. The captain, despite the risk in these reef-filled seas, took the ship in closer and signalled by searchlight, but could get no response. He considered the flames came from coco-nut husks owing to their brightness, and thought they might be a camping party in a boat from Mackay or Rockhampton. He sent a wireless message to the mainland, but I never heard if anything resulted from it.

The Barrier Reef itself is known to only a few marine explorers. "All its reefs and shoals and pools, and all its depths, are full of life; the channels and lagoons within the coral are instinct with bewildering beauty. All the corals are there—not the dead, bleached skeletons of corals which we see in glass cases flanked by a stuffed and preposterous blow-fish, but with all the brilliance of the living coral animal, which is no more an insect than the shark is an insect. The living reefs have all the colour of the tropics. . . . Carbonate of lime can be a dead and ugly thing; here, on the Barrier, it is a thing of definite loveliness. Coral shaped like skulls, and therefore called Brain Corals, having the freaks of cerebral markings and giving their name to the peculiar Skull Island, which looks like an ancient battle-ground of low-grade types, the white skulls shining in the sun;

corals corrugated like alligator skin ; asteroids or star corals ; the giant anemone and an attendant galaxy of sea-stars ; the frills and furbelows of the clam shell—ultramarine and peacock-blue and green ; corals spotted in turquoise and barred in black ; corals shrimp-pink, with yellow terminations, cup corals, convoluted and long-staked ; corals in large ovate masses, looking in the light green water like a flock of sheep in an English meadow in early spring ; corals like cauliflowers in shape and deep violet, with cream edgings for colour ; the nodular masses of organ-pipe coral ; the corals of Dog Reef, near Port Denison—shaped like a swimming dog ; the branching corals of the Medrepore Lagoon ; all growing joyously in the opaline water, which is at once the mirror of the shield. All the beauty of form of the prepared coral is but the bleached skeleton of the brilliant life of the Reef.”*

In the Dutch East Indies and in New Providence Island, one of the Bahamas group, I saw many coral reefs of like character and colouring, although their extent cannot be compared with that of the Great Barrier. Moreover, they have not the hundreds of large and small islands, often mountainous and clothed to their summits in the rich green of tropical vegetation.

I was returning to Brisbane in a somewhat disappointed frame of mind ; having intended to continue round the North coast of Australia by way of Thursday Island and Darwin to Broome in Western Australia, but I discovered soon after arriving at Cairns that this was almost impossible, except by air direct to Darwin, or, if I cared to wait an indefinite time, I might get a passage to Thursday Island. The sailing of the steamer which had been scheduled to leave Cairns for the round voyage to Freemantle, making a number of interesting calls on this long route, had been cancelled, owing to failure in obtaining a Government contract. However, it all turned out for the best, as I had only a few days in Brisbane before I was invited to visit a big estate in Central Queensland and to see something of station life in the interior.

* From a paper published under authority of the Minister for External Affairs

Chapter 8

STATION DAYS AND WAYS

LEAVING Brisbane in one of the maligned Queensland trains, I travelled slowly inland for several hundreds of miles. There are only two classes on Australian railways, but the first-class fare for long distances works out at little more than a penny a mile. My destination was Roma, in the middle west of this state, and a centre for many outflung cattle and sheep stations. After a long, tedious and hot journey I was whisked away by motor-car through quaint M'Dowell Street with its wooden buildings and out on to the open plains. The tracks were rough and full of ruts, which did not add to the comfort of this further sixty-eight miles in the scorching sun-heat of middle day. Two things I noticed as we bumped along at a surprising speed. One is that Australia has suffered unjustly from phrase-makers. Its blue gum-trees are neither shadeless nor ugly, and its central plains are not all arid and scorched. It is quite true that this continent-island has many scentless flowers, but it also possesses the sweet-smelling wattle and boronia, and it also has bright-plumed birds that are without song, as well as an even greater number whose musical notes can be heard in the trees almost every morning and evening.

These places, which lie to the westward of the Dividing Range, are, however, very hot and dry during the summer months, although the whole aspect of rolling levels, dotted with tall gums and clumps of mallee bush, flickering in the heat, changed when we ran up an avenue of fine trees leading to an imposing looking house, surrounded by wooden buildings, which, collectively, formed one of the biggest cattle and sheep stations in Western Queensland.

The son of the owner of this big estate—almost as large as an English county—was my host.

"What do I find to do?" he laughed in answer to

my leading question. "Oh! you'll see how we live out here during the next few days—and I'll say you'll be tired, not bored!" he added, with a suspicion of sarcasm.

Here is a typical day according to my diary: "Roused before dawn. Off riding at daybreak to look for sheep in the boundary paddocks. Camped at midday after seeking in vain for sufficient shade in which to lie down for a rest. Boiled the billy to make tea, ate sandwiches and cold, hard-boiled eggs. Rode away in another direction, across trackless plains with the earth cracking in the heat, to where a new artesian well was yielding an abundance of subterranean water, but from a depth of many hundreds of feet. Returned to the central station, bathed, dined and was glad to sleep."

On the following day, we again made an early start, but this time travelled luxuriously by car over a long rough trail to where there had been a round-up of cattle. The dust was blinding at first, but when my eyes had become accustomed to a half-closed method of observance, I watched the modern cowboy, who is quite unlike the screen variety, crack his stock-whip and ride among the stamping beasts. They were "cutting out" fat bullocks, which were to be driven overland for eighty miles to the railway. A small herd was slowly assembled from the thousands of beasts scattered over the plain. When they were driven off there was a stampede, but all I saw and heard was a cloud of dust, the thunder of hoofs, and high above the fog several "hands" riding and swinging their long hide-whips. It seems that it is the horse, more than the man, who must know by instinct when to stop, turn, gallop, or just economise energy by trotting leisurely, during a big round-up on the Queensland plains.

It came as a surprise to hear that there were very few kangaroos or opossums in this particular region. Scarcity of water, except the cattle-troughs, apparently accounted for this. It must not be imagined that I was called upon to "rough it" while staying at this station. There was a fine tennis court, made up of earth from an ant-bed, and in the house itself everything had been

provided for comfort—even luxury, if due consideration is given to the difficulties and expenses of transport. I learned that three previous owners had lost many thousands of pounds in an effort to make a success of this station. Years of drought and the failure of a single artesian well had caused the last collapse. Now, however, precautions had been taken with the easy assurance of ample capital.

One day when returning to the homestead my host was approached by two men who, to use an Australian phrase, were “humping the bluey.” They were swagmen. No! not desperadoes such as one hears of still in Queensland, and reads about in *Robbery Under Arms*” and such-like classics of the old Australia. On the contrary they were not even “sundowners,” but honest men and asking for work. They were given a meal, a night’s lodging in the bunk-house, a breakfast, and a lift towards the next big cattle-station. In this way the unemployed cowboy, carpenter, tinker, tailor or cook, genuinely in search of work in the outback, is passed along until his wants are satisfied.

So far I had seen station life from the owner’s point of view. This meant a few months, spent mostly in the saddle, or in the driving seat of a motor-car, with occasional tennis parties and dances. To these social events it is no uncommon occurrence for guests to drive fifty miles from neighbouring townships or stations. The manager’s wife, however, did not exhibit the same enthusiasm for the life as the son of the owner. “It’s all very well for young men or for the owner, who comes in from Brisbane just to see things are going on all right, but we poor people have to put up with the heat and dust—it’s the loneliness that hurts most,” she added suddenly. “Oh, I find plenty to do, washing, cleaning, trying to make the cook do his work properly, darning, mending. . . .” When she had finished enumerating her odd jobs, I felt quite sure that most girls accustomed to the life of a town would think it both hard and monotonous. The post-box at *her front gate* was twenty-three miles away from *her front door*!

From the station hands it was difficult to get either an opinion about their life or a connected story of their work. They grumble most at the absence of any form of society, at the sameness of the food, at the low wages—in their opinion—and at the night and day work to save the cattle during long periods of drought. One of these hard-bitten men of the plains told me that two years before he had ridden with a bunch of thirst-maddened cattle for five days and nights, eating and drinking in the saddle. Another described how, while on a station in the Northern Territory, he and another had been lost in the bush for three weeks. His companion had died of thirst. They were driving a bunch of cattle along a 200-mile track to where the beasts could be shipped to the world's markets. A thunderstorm at night had caused a stampede, and when morning came the two men were alone with a few beasts in an unknown country. Thirst had eventually destroyed all except the narrator of the story.

There are, however, many places in the interior of Queensland where closer settlement is being pushed rapidly forward; and others where it is possible for those with some farming knowledge but without much, or even any capital, to obtain land and a more or less furnished wooden house on what is known as "share farming." Although a hard-working couple, with or without children, will never starve when cultivating the land in this way, on a big estate; and, in good years, may enjoy a restricted measure of prosperity, there is little opportunity for advancement. One of the principal drawbacks is that a share-farmer cannot, of course, sell the property as a going concern, neither is he entitled to any compensation for improvements made to either the house or the land should he leave the property.

There is a saying in Australia, which has *some* element of truth in it, that "the quickest way to wealth is on sheepsback," but patience, perseverance, hard work and some capital are the principal requirements. Although land can be acquired cheaply, artesian water has often to be obtained; and it is generally considered, in

Central Queensland, that the land will not safely carry more than one sheep to every three acres. A reliable authority gave me the following simple calculation : (1) the minimum number of sheep required to support a family is 600, which, at *the end of the first year*, should yield a gross income of about £475, *plus* the addition to the flock of, at least, 200 lambs, which, however, must be largely regarded as capital appreciation. The fleece of a fully grown sheep is worth from ten to twelve shillings, and a lamb sold to the refrigerator usually fetches not less than twenty to twenty-five shillings.

The area of land required to maintain 600 sheep is from 1,800 to 2,000 acres, for which not more than £2,700 to £3,000 should be paid. There is, then, not only the cost of stocking, providing water, shearing sheds and a house, but also of meeting at least the first year's running costs.

Although these calculations are given here as a guide by a reliable authority, I know nothing about the financial aspect of sheep farming ; and the man from whom I obtained this rule-of-thumb advice added a final general warning to would-be wool producers. " Sheep-farming on a small scale is not likely to be successful unless you have ample capital as a guard against drought and the loss of animals, or, alternatively, to provide for annual expansion; and (2) you are able to buy *fenced* land with a homestead and water for an overall price little over twenty-five or thirty shillings an acre."

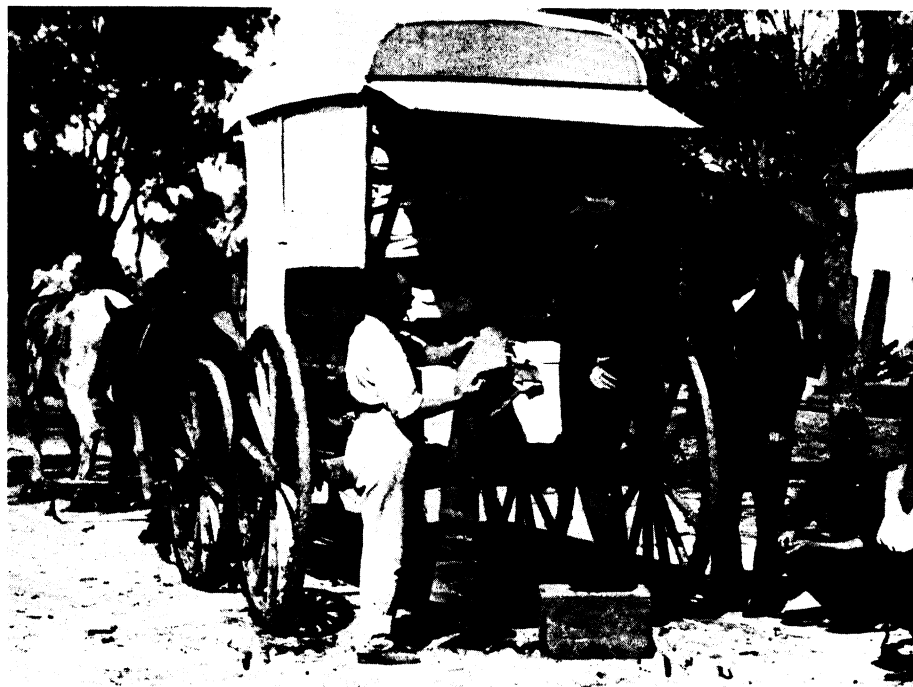
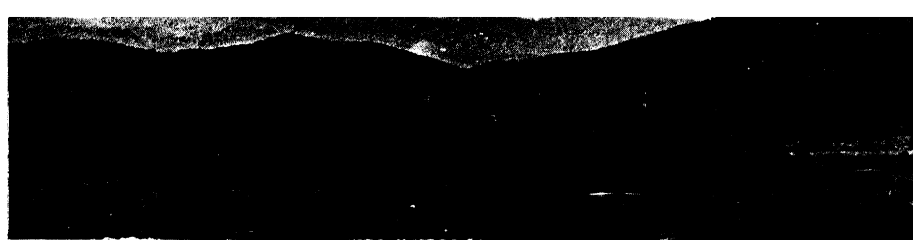
This is only the opinion of one successful " pastoralist," as they are called in Australia, and should be read here in conjunction with other opinions expressed in different States.

Pig farming is rapidly on the increase in Queensland and small factories for curing and otherwise treating the product of this industry are appearing in a number of pastoral centres.

The only unpleasanties of my journey back to the sea and ships was the blowing coal dust, which was carried in open trucks behind the engine, and the absence of ice to cool the drinks served in the quaint

little wayside stations while the train waited. It was during this long and tiring journey that I had an endless discussion with a local politician on the need of Australia to make a determined effort to people the vast tracts of the centre and north. His views were, in my judgment, entirely parochial. There was mention of a determination to keep Australia white, of the impossibility of getting people to live in the back-o'-beyond, of enervating heat, of the absence of water and transport, and of a hope that one day gold might be found there in sufficient quantities to cause a rush, such as those which had populated many parts of Western Australia in the early days of settlement. It was a policy of despair, born of a lack of knowledge of what has been accomplished in other parts of the world. The aeroplane and the construction of good motor roads are, however, rapidly opening up Central Queensland.

The journey back to Brisbane took me across the fertile Darling Downs, where I caught a glimpse of the busy agricultural town of Toowoomba. Here is what I wrote about this part of Queensland in a former work : "The area of this region, which contains some of the finest soil in the world, is over 4,000,000 acres, and the production of grain averages over 1,000,000 bushels a year. On these wheat-lands of Australia, just before the harvest, golden corn stretches like a rippling yellow sea all around the numerous homesteads, which have a look of permanency and prosperity. Here barley, lucerne, wheat and maize grow luxuriantly, and dairying is largely carried on. The Darling Downs are undoubtedly the richest agricultural region in the whole of Australia, and to appreciate these fertile slopes one must have ridden dust-choked and parched, across the waterless plains of the tropical interior. Toowoomba, the capital of this farming belt, is the most prosperous agricultural town in Queensland, Ruthven Street, which is the main thoroughfare presents a lively scene, especially on certain days in the week, and the buildings are of stone and concrete, which cannot be said of all the inland towns of Australia."



1. THE DIVIDING RANGE

2. A TRAVELLING SALESMAN

3. GYMPIE, QUEENSLAND



CAMP LIFE IN THE NORTH QUEENSLAND BUSH



A QUEENSLAND RIVER



STATION LIFE IN AUSTRALIA



A ROUGH RIDER



Chapter 9

PERTH—AND THE PROMISE OF THE GREAT WEST

AS THE states of Victoria and South Australia were both known to me from previous wanderings in this "Great South Land" of the early navigators, I voyaged from Brisbane halfway round the Continent to Fremantle and Perth in Western Australia. To describe how I moved from one place to another, generally in comfort, in this land of immense distances, would occupy undue space. All the capital cities of the Commonwealth can be reached by well-equipped trains; and although some of the journeys, like that between Perth, the capital of Western Australia and Adelaide, may be dusty and become somewhat tedious, there are always the alternatives of air or sea transport. And what a land of contrasts this Australia is! Variety again awaited me where the pavements, or sidewalks ended in Western Australia. Here the wagons of last century were leaving for the "never never" lands of the still almost unexplored interior, beyond the vast sandy deserts, the gold-fields of romance, and the great wheat-growing uplands. These wagons of the old and yet new pioneers were often drawn by camels, bringing to mind pictures of Egypt and the great Sahara.

Before all this, however, there was Perth and its port of Fremantle. Situated a few miles up the Swan River and standing in the middle of the fertile coast belt, the capital of Western Australia is the unrivalled emporium of the whole state, and has a population, including that of Fremantle, of about 300,000. There are many fine buildings; two cathedrals, theatres, clubs, shops, race

Opposite—On the Swan River stands Perth, Capital of Western Australia.

tracks, and, above all, parks and seaside resorts of its very own. About twelve miles distant there is Fremantle, the principal port of Western Australia, which has quite superseded the old Albany as the calling-place of most ocean liners.

There is always confusion in the minds of strangers regarding the topography of certain Australian capitals. Fremantle, for instance, at which I stepped ashore one sparkling morning, with the air so warm and the sky so clear that I quite forgot that it was getting towards the southern winter, is just over twelve miles from Perth, the capital of Western Australia. These towns almost join, however. It is all the fault of the beautiful but somewhat shallow Swan River that ocean steamships stop at its mouth. Perhaps it is as well that this is the case, because Fremantle is decidedly dull, and few people stay there for more than an hour or two. Nearby, however, are the popular Cottesloe and Brighton beaches, with bathing, surfing and other healthy pastimes to enable those visitors from the desert goldfields to recover some of their lost energies.

The streets of Perth are not only imposing, but they also impressed me as being populated by men and women intent upon the building up, in a sane way, of the great State of Western Australia. Hay Street is really a fine business thoroughfare, and the residential suburbs, both of Central and South Perth, are far more alluring than the surroundings of most capital cities, which always seem to be places laid out with an eye to economy of space, and from which all amusements, except cinemas and tennis courts, should be carefully excluded in case they might lead the inhabitants to neglect their businesses.

The most attractive spot hereabouts is King's Park, 1,000 acres of natural beauty overlooking the highlands known as Mount Eliza, skirting the river bank and facing the blue waters of the Swan. It has not been spoiled by the creation of too many artificial gardens, although flower-beds and monuments play a part in the scheme of things. "When the red gums are in flower the main

drive is through an avenue of flame, or, if the wattles are blooming, the progress is through arboreal clouds of gold." It is in the spring, however, when the ground is aglow with the reds, purples and yellows, and the unique kangaroo paws are growing profusely, that this place is at its best.

One day I was whisked out of town by car to see someone or some place which I was told that on no account should I miss. Unless one has been "called out" by a party of young Australians on pleasure bent, well, it is difficult to know exactly what this means. All that I could extract from my hosts was that we were going to a "Yanchep" for an hour or two. I naturally concluded it to be some typical Westralian entertainment, and it was !

When the speed of a big car exceeds sixty-five miles an hour the passing scenery becomes to me, as a helpless passenger, of little or no interest compared with oncoming traffic or bends in the road. Minutes passed and someone said that the patches of green that flickered by in the roaring gale were vineyards. Then we swerved round by some trees and there was Yanchep—I couldn't see anything except a boating-lake and trees.

The relief was great when we all dismounted, and almost immediately a girl dragged me over to a tree to see the live authentic prototype of the teddy bear. I cannot imagine any animal more attractive to children than the Koala bear in this vast—thousands of acres—national playground. In addition to some remarkable caves, there are swimming pools, tennis courts and a big lake for sailing, canoeing and rowing. One of the most remarkable sights in the cave, which burrows nearly fifty feet into the limestone, is a tree which has sent its roots through the fifty feet of earth and rock, down through the cave into a running underground stream. The attractive power of subterranean water on the roots and branches of trees, as claimed by the water diviner with his twig, is here proved beyond all question.

A three miles walk through bush paths led to a bathing beach, largely used by those who stayed at the Park

Hotel or the less expensive Lodge ; I understood the weekly inclusive charge at the former, which certainly provided an excellent lunch and tea, was under four pounds! At the Lodge it was less than three pounds! And yet many of the *jeunesse* of Perth take the earliest possible opportunity of going to the far more expensive and overcrowded Sydney or Melbourne. This was certainly one of the most interesting places of amusement around Perth—but it is over thirty miles from the capital!

Another exciting evening was spent beneath the great arc-lights of the Perth Trotting Course, with its flowers, shrubs and trees ; and its races by chariots drawn by trotters and pacers who attain speeds up to nearly thirty miles an hour. The drivers of the steel traps are dressed in all the bright silks and satins of their racing colours and they form a brilliant picture under the million candle-power shadowless lights on the mother-o'-pearl track made of crushed and iridescent oyster shell.

The tote, the bookmakers, the enclosures, the refreshment bars, and a crowd of about twenty thousand enthusiasts made an unforgettable scene in the warm night air, all of which I should like to have brought to England to show to those who imagine that "down under" has the same meaning as the "back-of-beyond."

After a most enjoyable time in Perth and the surrounding country, accepting the generous hospitality of its citizens with an effrontery which would have made me blush with shame in more restrained and formal England, I suddenly awoke to the realisation that it was time I absorbed some of the facts concerning the land of which this was the chief port, city and playground.

Strangely, I have always found that where sunshine, sea winds, beaches and fun are all around, as here in Australia, in California, Florida, the Cape, Natal and the West Indies, it becomes increasingly difficult for me to write of the more sober things of everyday life. Move me but a few miles away from these temptations and the Scottish strain in my blood sets me down to investigate, to learn and to record. So I moved away from this allure

into the State of Western Australia, largest of the great Commonwealth, with an area of 975,920 square miles and a population of over half a million. It is eighteen times the size of England and Wales, and embraces nearly one-third of the Australian continent. In the north it is tropical, and yet Albany, on its southern coast, possesses a cooler summer climate than any place on the Australian littoral. It has a coast-line 5,200 miles in length.

The north, north-west, and south coasts of Western Australia derive no small amount of picturesque interest from the profusion of islands, small and large, which fringe the mainland, rendering navigation intricate and dangerous. On some of the islands guano deposits are worked, and others are visited at certain seasons of the year for turtles and *bêche-de-mer*, that filthy looking sea slug which is more delicate than nightingales' tongues to the mysterious palate of the Chinese gourmand. The two islands of most importance are Dirk Hartog, to the west of Shark Bay, now a large sheep station, and Rottnest, twelve miles from Fremantle, formerly a penal establishment for natives, but now a popular summer resort, for which its many natural beauties admirably qualify it.

Regarding the better known portion of the Western Australian coast, it may be said that it fully excuses the misjudgment of the early discoverers. It is for the greater portion low-lying, bald, unpicturesque and uninviting, and never does it suggest the pleasant stretches of fertility and the realms of forest wealth lying a few miles inland. Strangely enough, the greatest attractions are at the very extremities of the immense coast-line, the north and the south-east, and there the scenery develops from the commonplace into something imposing and grand—rugged and menacing walls of rock upon which the rollers lash themselves in fury, and myriads of islands, some scrub-covered and inviting to the sportsman or artist, and others, hundreds of them, mere rounded hills of granite, resembling immense cannon balls, and in their profusion suggestive of spent ammunition on the battle-ground of prehistoric giants.

Western Australia is not a mountainous country, and the highest known point in the State reaches an altitude of only 3,800 feet. But many of the mountains, rising abruptly from low-lying plains, present a striking appearance. In the north-west, high rugged hills outcrop precipitately from the dead level of the plain, seemingly as artificial an imposition as the Pyramids.

The best known and most important elevation is the Darling Range, running north and south about twenty miles inland from the sea for a distance of some three hundred miles, and affording in the blue distance an admirable perspective for the picturesque beauties of the metropolis. There are no peaks over 1,500 feet in height, yet, as the range rises suddenly from the low coastal plain and its slopes are thickly wooded, it appears more imposing than other ranges of greater altitude; also, it has no little influence on the climatic conditions of the most closely settled area. The Stirling Range, situated about forty miles to the north-east of Albany, is the loftiest range in the southern portion of the State, and being perfectly isolated, and ascending steeply from the plains, is impressively visible for a great distance. The highest altitude in this range is 3,640 feet. Some of the most rugged country of the interior is in the north and north-west, where, in parts, the bareness of the hills, the long diabase dykes resembling broken Roman walls raised by nature across the continent, and other strange geological characteristics, relieve the otherwise palling monotony of the landscape.

“Of navigable rivers there is practically only one, viz., the Swan River, on the picturesque shores of which the capital city reposes. The Swan is a shallow, almost currentless stream, but it is navigable by small boats in the estuarine portion for some twenty miles, and is capable of being deepened to accommodate extensive shipping, should the necessity ever arise for bringing the maritime commerce nearer to Perth. Many of the rivers in the south-west are perennial; they follow a sinuous course for hundreds of miles, and present scope for irrigational adaptation; but the majority of the others

are simply immense storm-water channels which carry off the floods after the rainy season. Thus in the north-west, where the largest and longest rivers are, the flooded stream, welling from its shallow channel over a flat country may, after the heavy rains, have a width of two or three miles, and be impassable for weeks. But in time the flood subsides, the stream shrinks back into its narrow bed, and in the rainless season there is only the sandy course where the river ought to be, except for the occasional wide pools where wild fowl in myriads congregate. As with the rivers, so often it is with the lakes. There are times when the traveller may ford lake after lake and river after river, as shown on the maps, and yet see no water. He is merely calling at the winter or summer residence, as the case may be, of the river or lake ; in the wet season the water is there in quantity and area, but as the months go by it either percolates downwards or evaporates and enjoys a few months of aviation travel. But of a certainty the time of precipitation comes, and, as regularly as the return of the swallows, the moisture comes back to the thirsty earth again."

In a country of such immense area the general contour is difficult of definition, but so widely and daringly has exploration been conducted that, except for obscure portions of the interior, the total area of nearly a million square miles is almost completely mapped. Naturally there are graduations of soil and climate with every degree of latitude and longitude. The north, truly tropical in climate and vegetation, and the north-west, practically untimbered, may both be described as mountainous, consisting of alternating high and low-lying plateaux of either sandstone or granite formation. On the other hand, a large portion of the south-western and southern seaboard is of a flat, sandy character, and is in reality a vast forest, the timbers of which are of great commercial value, while the soil is provedly capable of profitable husbandry.

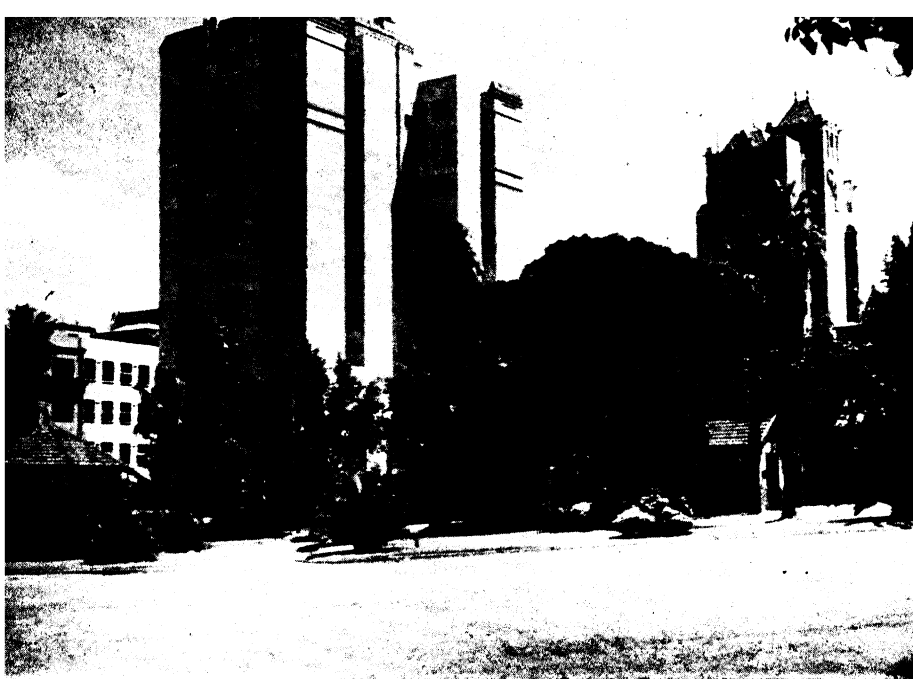
Of the vast hinterland, the characteristics but not the capabilities are known. This great tableland has an altitude of one to two thousand feet above sea-level, and,

whilst in parts the surface consists largely of sand-dunes, there are other considerable areas of clay soils. So far, settlement has proceeded only some six hundred miles inland from the seaboard, and whether the rich mineral area on which the existing gold-fields are situated will be continued, and whether pastoral possibilities are contained in the untamed area, are questions which are still to be determined by exploration and experiment. In fact, the ultimate capacity of Western Australia generally has still to be learned. Vast in area, with a wide range of climate and soils, with manifold known resources, and an endless number of others yet to be translated from prophecy to fact, it is inevitable that a veil of indefiniteness should hide from seers of the present day many of the characteristics and qualities which will tell in directing the ultimate destiny of this young giant of the Australian Commonwealth.

Some of it is known to be a desert, sandy and waterless, and somewhere in its undulating distances, where, in the treacherous mirage, phantom lakes, rivers and mountains rise to lure the traveller to destruction, the bones of lost explorers, the valiant vanguard of civilisation, bleach white in the sun. Yet of recent years further exploration has circumscribed the desert considerably. Portions of the area over which that hopeless term was written large in bygone times, when knowledge was less, have been found to be eminently suited for the rearing of sheep and cattle. The pastures are good and water has been found regularly at shallow depths ; the limits of the artesian basin have yet to be determined.

Over the so-called desert the explorer, Canning, passed in 1908 on his nine hundred miles trip from Wiluna to Hall's Creek ; over the so-called desert between Kalgoorlie and the South Australian boundary the surveyors of the transcontinental railway route passed in the same year, and the reports of both gave a new value to the hitherto profitless interior.

The climate of the south-western portion of the State, of which Perth may be taken as the centre, is excellent. During the summer months the warm days are tempered



Above : PROMINENT BUILDINGS, PERTH, WESTERN AUSTRALIA

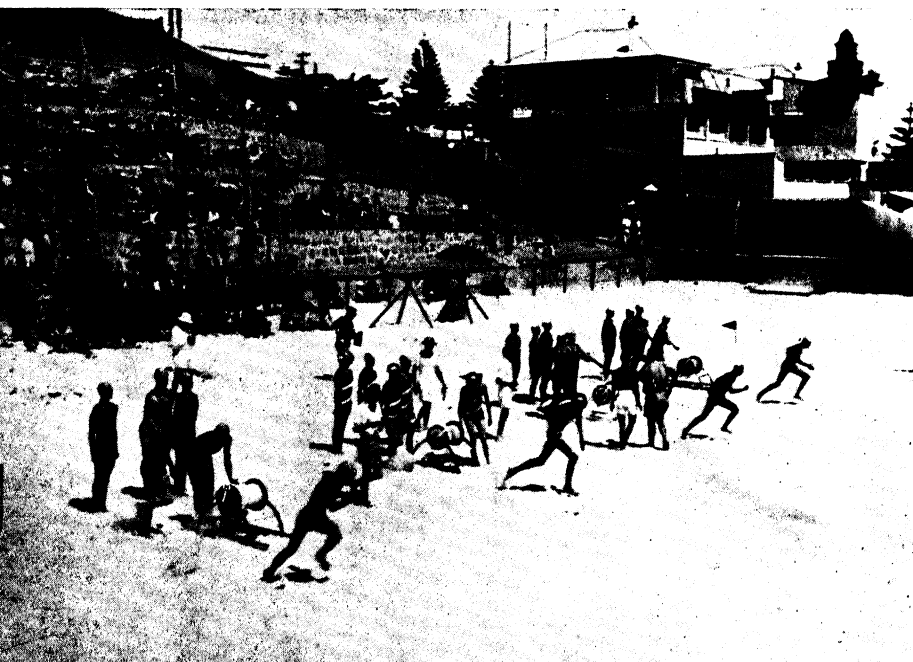
Below : PARLIAMENT HOUSE, PERTH, WESTERN AUSTRALIA





Above : THE BEACH, SCARBOROUGH, WESTERN AUSTRALIA

Below : A "RESCUE RACE " AT THE SURF CARNIVAL, COTTESLOE BEACH, WESTERN AUSTRALIA.





Above : ALBANY TOWN AND HARBOUR, WESTERN AUSTRALIA

Below : ARBITRATION CAVE, KASLIN ISLAND, WESTERN AUSTRALIA



by the sea breeze which comes up at noon, and makes the remainder of the day pleasantly cool. This breeze extends at least one hundred and fifty miles inland over the whole of the agricultural areas. The mean temperature of Perth for twenty-two years is 64.8°F. The rainfall is heaviest in the south-west, diminishing thence northward and eastward. It also decreases in the coastal ranges as we proceed further inland. On the coast it is approximately 30 ins., while it is necessary to go nearly two hundred miles inland before the 10-inch limit is reached. The average rainfall, taken over a period of twelve years, is, in the Eastern districts, 9.70; in the South-western district, 24.95; and the Eucla district, 18.72, or an average of 17.7. The following table shows the average rainfall and temperature at the various places :

					Inches	Mean Temp. Deg. F.
Geraldton	-	-	-	-	18.95	67.6
Perth	-	-	-	-	31.21	64.8
Bunbury	-	-	-	-	34.47	62.8
Albany	-	-	-	-	30.52	60.6
Northam	-	-	-	-	21.63	64.4
Kalgoorlie	-	-	-	-	8.57	65.3

An area of between forty and fifty million acres in the southern portion of the State is eminently adapted for the cultivation of wheat, oats, or barley. Commencing at the Darling Ranges, where the annual rainfall is 35 ins., the wheat belt extends eastward, with a gradually diminishing rainfall, to Merredun, where the average rainfall is over 10 ins. The whole of the land served by the Great Southern Railway and the Midland Railway, as far north as Northampton, lies within a rainfall belt of 10 ins. as the minimum, and, as the rains come regularly just at the time crops require them, it is safe to grow cereals anywhere inside this area. In fact, the only limit to the wheat-growing area within this belt is the distance from railway connection. From twenty to thirty miles is the utmost limit at which it has hitherto been profitable to haul wheat. An enormous area of wheat land has been made available to the selector by the planning of spur

railways, and when those lines which it is intended to construct are completed a further large area will be opened.

The south-western portion of the State, which enjoys the fairly heavy rainfall of over 30 ins. per annum, is particularly well adapted for the growth of fruit, especially apples for export. The elevation of the country—it is 1,200 feet above sea-level, even at Kalgoorlie—is responsible for the salubrity of the climate. The north-west and northern portions of the State are almost entirely devoted to the production of meat and wool.

The climate in the tropical areas is divided into two seasons, wet and dry, the former lasting from the middle or end of November to the end of March—the maximum temperature being in this period 100 degrees Fahrenheit, occasionally more. In the winter months the weather is for the most part fine, clear, calm and pleasant. The rainfall is from 10 to 33 ins., the heaviest falls occurring in the extreme tropics. The regularity of rainfall has placed the pastoral industry of this State in a flourishing condition.

The richest of pastoral districts are around Yatheroo, and on the Victoria Plains, some few miles north of Perth. The great Kari forests are situated near Mount Barker, and Jarrah wood is shipped from Rockingham. The chief towns of the gold-fields, besides Coolgardie and Kalgoorlie, are Leonora, Menzies and Boulder City. Gold, copper and coal are the chief products; and it is interesting to note that the wages of miners vary from twelve to twenty-five pounds a week when actually working underground. Around the towns, of Perth, Fremantle and Northam, fruit is largely grown and the making of wine is an important industry.

The ports, other than Fremantle, on this long stretch of the Australian coast are Roebourne, Onslow and Geraldton in the north, and Augusta and Albany in the south. The anchorage at Albany could accommodate the largest fleet imaginable, but its prosperity seems to have declined during recent years.

The extreme north of Western Australia is to all intents and purposes a region separate from the remainder of the State, being divided on the seashore by the "Eighty-mile Beach," and in the interior by the "Sandy Desert"—two barren tracts which are crossed only by the telegraph wire—it belongs more closely to Northern Australia than to the fertile West Coast. Kimberley, the principal district, lies completely within the tropics, and in common with the whole of Northern Australia possesses a hot climate, and is subject to heavy summer rains with occasional hurricanes. In the tropics summer is the rainy season, whereas in South, or temperate Australia, it is the time of heat and drought. The chief industries of the North are gold-mining and pearl-fishing; and the ports are Broome, Wyndham and Derby, all of which are very small towns having only a sluggish coasting trade.

Chapter 10

ROMANCE OF THE GOLD-FIELDS

WHAT a thrill that man must have felt who, little more than half a century ago, spent a failure-disturbed night leaning against a hard mound and, on awakening at dawn, struck the top of the almost sand-covered boulder with his axe and cut off one of the largest nuggets of pure gold that had, up to then, been found in the whole of Australia. Hundreds of millions sterling have since been mined from the twin gold-fields in this same great State of Western Australia, where the pearls of its northern fisheries still add their quota to its wealth and progress.

A desire to see something of the "Golden Mile" and the desert mining cities of Coolgardie and Kalgoorlie caused me to leave Perth by the "Gold-fields Express" early one evening, and the 375 miles to Kalgoorlie were traversed during the night. I expected to find a small town of wooden frame-houses and unmade roads; instead, however, there was a modern city with solid-looking buildings, broad streets and such mining machinery as I had not seen before except on the Rand. Regarded as a city, however, Kalgoorlie is not sufficiently attractive to call for a visit from anyone without a keen eye for romance. It is surrounded by desert, the trans-continental trains pass through it on their two-thousand-mile journey from Perth to Melbourne, and it is hot, dusty, and glaring. Yet over this region, more perhaps than any other in the whole continent, there hovers the ghost of a past romance, redolent of the great days of British expansion and achievement.

The existence of mineral wealth in the interior of the colony of Western Australia had always been suspected, and the prospects of a prosperous mining era dawning upon the country was the burden of oft repeated predictions, as explorers returned from the dark interior with reports of auriferous areas traversed, but seemingly inaccessible to the practical miner. Yet prospecting in

various portions of the State had produced only intangible results, and it was not until the actual discovery of payable gold in Kimberley in 1885, and the subsequent rush of population into the wild interior of tropical north-western Australia, that the colony felt the first heart-flutters at the thought of the imminent inheritance of unexpected riches. But the golden age was not yet. Kimberley rose, flourished, and set ingloriously. The grand revelation was yet to come. The imagination, however, had been excited, the eye had been sharpened to look for gold, and the public mind had acquired the habit of thinking of gold.

In addition, to make the prospects brighter, the population, since the Kimberley rush, had been augmented by some thousands of adventurous spirits from outside the State, and their efforts continued to permeate the atmosphere with the germs of gold fever. Soon the prospectors were scattered through the interior from Yilgarn to Kimberley. The discovery of the Yilgarn gold-fields in 1887, the Pilbara field in 1888, and the Murchison field in 1891, was a natural consequence of the prevailing sentiment. By 1890 Western Australia possessed a recognised mining industry, and the production for the year totalled 20,402 ounces.*

Two years later the State showed signs of awakening from its lethargy in the fact of a telegraph line to Southern Cross, the centre of the Yilgarn gold-field, being opened, and a bill for the construction of a railway to that centre being passed. The mining population was by this time a leavening factor in the community, and the fact that gold was being won in profitable quantities was enough to put a great proportion of the population on the alert. They were prepared for something sensational, but the whole community was turned topsy-turvy by the almost incredible riches unearthed by Bayley and Ford in April 1892, at a place in the wilderness which, in a month, the whole world knew as Coolgardie. These two daring spirits, fired by the lust of gold, had pushed out east of Southern Cross on a prospecting expedition. Over the waterless desert they pursued their quest, and,

* "*Western Australia*"—official.

as if by a miracle, camped on a spot the richness of which was in a few months to become a world sensation.

Prospecting across the adjacent flats they found abundant traces of alluvial gold, and in two or three weeks had specked and dry-blown over 200 ounces. Running short of supplies they made back to Southern Cross, but immediately returned to the scene of their find. On the evening of regaining their camp they attacked the cap of a reef with an axe, and it was as though they had broken the seal which kept the secret of King Solomon's mines. In the space of a few hours they chopped off the surface of the earth solid chunks of bullion, weighing in one instance fifty ounces, and giving them a parcel of five hundred ounces of almost pure gold as the total result of their evening's inquisitiveness. Coolgardie was discovered, and the history of the West Australian gold-fields, amongst the most notable in the world, had begun.

The find was reported at Southern Cross, and within three days that centre was deserted and its population was frantically hurrying through the trackless desert to the scene of this reef of pure gold. Along the newly opened telegraph line the news was flashed to Perth, and the capital was caught in the throes of the gold frenzy. A newspaper paragraph on the following morning stated: "In Perth or Fremantle everyone seems to be either carrying tents, picks, shovels and dishes or otherwise preparing for the road." Throughout the country the news spread like wildfire, and from every town in the State men departed into the new land of Ophir. The railway to Southern Cross was still a thing of the future, but along the unmade track to the eastward a motley procession was moving—coaches, teams, horses, camels, pedestrians (some of them conveying their whole fighting outfit in a wheelbarrow), were straggling into the interior, and braving with a resoluteness born of feverish hope the hardships which beset a great portion of the three hundred and fifty miles of track between Perth and Coolgardie.

But the find was not merely a local sensation. If Western Australia was dazzled by the splendour of her

latest inheritance, Eastern Australia was no less astonished, and no sooner had confirmatory testimony been adduced as to the genuineness of the Coolgardie discovery than the young manhood of the Continent heard and answered the call of the West. The Continent seethed with excitement, and a fever was in the air. Imaginations were fired by the telegraphed reports of Coolgardie's almost fabulous wealth, and this remote spot in a sterile desert became the Mecca to which every eye and mind hourly turned. Pilgrims rushed to the ports in thousands and the few steamers and big sailing ships engaged in the West Australian trade were all too inadequate to meet the demand for passage accommodation. Every boat that touched Western Australian shores discharged hundreds of adventurous souls—men of youth, courage, strength and enterprise, the very pick of Australian manhood. All that had been denied to Western Australia in the past—attention, population and capital—the world now stumbled over itself in its eagerness to give.

Coolgardie became a word to juggle with in all quarters of the globe, and Europe, as well as Eastern Australia, flooded its population into the embarrassed West. And not only population, but money as well. Unimproved acres in a waterless desert, hundreds of miles beyond the nearest railway line, and without an improvement visible in the vicinity of greater substance than a "hessian humpy," sold at many pounds per foot, and companies floated almost of their own volition on to the buoyant markets of London and Australia. Money flowed into the country in millions, and probably nowhere else had there ever been such a sudden accretion of wealth, population and commerce, as Western Australia enjoyed in those stirring days.

Perth, Fremantle and Albany were overrun with new arrivals, house accommodation was at a premium, and prices rose to famine heights. All this time adventurous gold-seekers, merchants, tradesmen and labourers were swarming into the interior in an interminable stream. Coolgardie beckoned them on, and across the sterile

plains they swept, outpacing civilisation without a regret, and facing without fear the perils of the inhospitable bush, the barren stretches of salt lake and dreary spinifex, the waterless wastes of desert sand, and the burning rays of a semi-tropical sun. In a few months the foundations of a city—the industrial and human foundations—had been laid in the desert, and a community of some thousands were established in an aggregation of brush, sacking and galvanised iron shanties.

In the course of the next year, and in a manner equally as sensational as the finding of Coolgardie came the discovery of Kalgoorlie, one of the wonders of the world. Just as Coolgardie, had eclipsed Southern Cross and robbed it of much of the financial nourishment needful for its development, Kalgoorlie, in turn, was to make Coolgardie pale into insignificance. But for a few years yet Coolgardie, growing in size and comeliness, was to continue to wield a magic influence, and to attract like a magnet from all parts of the earth. The Government had come forward nobly to the aid of the people, and, whilst mile upon mile of the railway was being gradually pushed inland, public officers were busy improving the road facilities, opening up water supplies, and making easier for man and beast the invasion of the desert.

It was not until July of 1894 that the railway to Southern Cross was opened, but within the next few months telegraphic communication was established with Coolgardie and Kalgoorlie, and a Government, greatly daring, resolved to take the tide of the State's affairs at the flood, and on the 18th June, 1895, let a contract for the extension of the railway to Coolgardie. In the following March, the railway was opened and six months later railhead was extended to Kalgoorlie. There is no need to dwell here on the wonderful metamorphosis of Kalgoorlie. The galaxy of wonderful mines that constituted the Golden Mile had begun to reveal their riches, and the crude mining camp was already a thing of the past. In its stead the elements of a modern city were visible. Buildings of brick and stone were already in evidence, and the amenities of civilisation had been established in this



1. A boring and prospecting outfit getting ready for the goldfields, W.A., 1895.

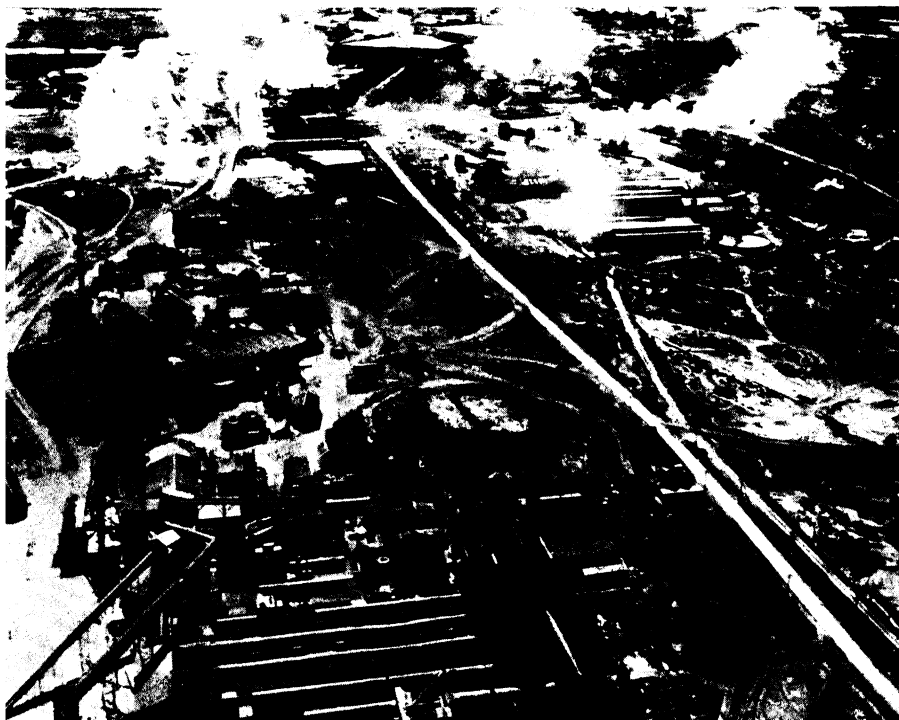
2. Coolgardie celebrates the opening of the railway in 1896

3. Gold! Loading camels for a new rush in the early 'nineties



Above: THE GOLDEN MILE, KALGOORLIE, 1910

Below: THE GOLDEN MILE TO-DAY



spot, 375 miles inland from Perth, and in the midst of what up till three years before had been regarded as a profitless waste of thirsty sand. Coolgardie, too, had been rising, and was now an established town of up-to-date features, but the "old camp" was speedily surpassed by its younger and more brilliant rival.

Money and muscle arrived in the desert by trainloads to play a part in the exploitation of the gilded wilderness. In 1895, over £50,000,000 was subscribed, chiefly in London, on behalf of "Westralian" flotations, and for several years thereafter the State was to become the happy hunting ground of the workers, fossickers, investors and gamblers from all parts of the world. As the bonanzas of Kalgoorlie opened up with golden promise population continued to surge in. Towns sprang up in a few days far and wide throughout the State, property values multiplied themselves hourly and fortunes were made with almost incredible suddenness. A romantic glamour was over the land. Poverty was converted into opulence as by the touch of a magician, and no country ever saw more thrilling changes of fortune than were of daily occurrence in that modern Eldorado.

It is but natural that the huge production of gold during the years of surface working should not have continued. From an output valued at £1,148 in 1886 it rose to £8,770,719 in 1903. Since then it has shown a steady decline, but the working of other ores has enabled this State to maintain a high rate of mineral production.

It was this magnet which populated and caused the development of Western Australia. Looking at the old dumps of the *Golden Mile*, I could not help wondering why the world has yielded no such startling discoveries as the Rand, Klondike, Ballarat, Bendigo, Coolgardie and Kalgoorlie during the first half of the 20th century. It cannot be that the earth is played out of this precious metal, because there are millions of square miles of territory still unexplored, but is it that the same enthusiasm which carried the old prospectors through untold hardships no longer exists? Or has the glamour of oil robbed gold of its lure?

Chapter 11

PEOPLE AND PEARLS OF THE NORTH

My next adventure should have been in the vast wheat-fields, orchards and pastoral lands of the Darling Ranges, just a small region in the million square miles of Western Australia. Instead, I returned to Fremantle and went on board a vessel which had come down from the pearling grounds of Broome, the only town in Australia, except Darwin and Thursday Island, where there are coloured labourers from overseas working in large numbers.

I was told by the captain of this supply ship that in Broome, which is over 1,480 miles north of Fremantle, the scene is more Oriental than Australian. One hears a babble of strange tongues, Japanese, Filipino, Malay and Chinese. The white population seldom exceeds a hundred, while there are three times this number of natives, all of whom live on board the pearling luggers or are restricted to their own quarter. The sleepy tropical town of Broome has long been Australia's pearling centre, and on its wide streets soldiers of fortune of every colour and creed met and drank, planned, quarrelled and gambled right up to the time when Japan entered the Second World War, and blasted the town from the air in March, 1942.

The pearling schooners, or really luggers, are comparatively small craft of from fifteen to ninety tons. They carry a complement of seven, and the only white man aboard is usually the shell-opener, who is often the owner of the boat. The diving is done in waters where the depth varies from ten to twenty-four fathoms, but

the danger increases proportionately to the depth. The penalty of a hasty descent or ascent is diver's paralysis. The ordinary harvest is the mother-o'-pearl shell, which has a fixed value according to grade and the prices ruling in the world's markets. The infrequent pearl itself is the prize which may at any moment reward the owner, who is consequently the shell-opener. These small but valuable "stones" are so easily secreted that there is, however, an illicit trade in what are known as "*snide*," or stolen pearls. Could the true story of these forbidden transactions, and the crimes of violence and mutiny which have preceded them in the past, be known and written, what a romance of tropical life it would make.

The pearling industry of the whole northern coast of Australia from Cape York, Queensland, to Broome in Western Australia, suffered during the war and post-war years a serious decline. Hundreds of the old sailing luggers, and also the more modern oil-engined schooners lay rotting in the little harbours and creeks and on the beaches between Broome and Thursday Island. The sale of shell along the whole coast has declined to such an extent that, even before the war years, the one street of queer little Shark Bay, situated further down the West coast than Broome, was actually paved with pearl shell which glinted like opal in the sunlight.

A number of these little ships and their gallant crews did yeoman service moving men and materials from the islands which the Japanese overran.

Some indication of the relative values between the shell and the pearls will be obtained, however, from the results of one season's catch. The amount of shell raised was 716 tons. The shell sold for £98,127 and the pearls for £2,360. "Essentially tropical, pearling is associated always with strange seas, burning sunshine, an adventurous life in a polygot community, a sensational gambling element—for lives as well as fortunes are at stake—and generally abnormal conditions, which lift it from the plane of the commonplace. In spite of the 'White Australia' ideal, those characteristics cling to pearling in Western Australia," says an official review of this

industry. It is set in tropical waters, the luggers are manned by Asiatics, and Broome, a commercial base, is almost a patch of the Orient planted in Australian soil.

In pre-war years there were nearly four thousand Asiatics in Broome and only three hundred and twenty white men. The crews of the pearling vessels were specially exempted from the White Australia policy. Nearly all the divers were Japanese, and the death roll among them was very heavy. There is a Japanese cemetery in Broome, where it was customary to bury, not only the dead, where bodies were recovered, but *the few personal relics* of those who met, perhaps, more terrible ends deep in these tropical waters and who were never seen again.

Up to the time when cultured pearls were placed on the market in large numbers by the great Japanese firm of Mikimoto, the largest fishery in the world was that of Northern Australia, which, from 1869 had supplied more than three-quarters of the world's output of pearls and pearl shell, including some of the most valuable gems in history. Among these are the famous "Southern Cross" and "Star of the West." The first of these is a remarkable cluster of gems, the finest ever discovered anywhere in the world; it is formed of nine separate pearls, all *naturally fastened together in the form of a cross*, approximately one and a half inches long; seven pearls form the shaft and two the arms. The individual pearls are not of unusual size or beauty; the gems' value depend on their unusual formation. The cross was sold for an immense sum, stated to be in the vicinity of £50,000, and is now in the Vatican City, Rome. The "Star of the West" brought to the surface in 1917, is the finest single pearl yet found in Australian waters. It is a drop-shaped gem the size of a sparrow's egg, weighing 100 grams. It was sold in Europe for £14,000.*

Year in and year out a small army of divers, including dress-divers of almost every nationality, and native "skin-divers" (natives who do not use a diving dress), is engaged in Australia's tropical waters, walking the

*From *The Seagoer*, Vol. XII, No. 4, 1947.

floor of the seas and gathering the big gnarled oyster shells which may or may not contain valuable pearls.

“The luggers do not go out simply and solely in search of pearls. If gems are discovered, it is luck. What the men seek is pearl-shell—mother-o’-pearl—which is sold at so much a ton, and is used in the manufacture of buttons, knife handles, and other articles. There are several species of pearl oyster found in Australian waters, including the largest oyster known to exist. It grows to an average size of about twelve inches in diameter, and has a weight of ten pounds, or more. It yields the most valuable mother-o’-pearl, which at times has sold for as much as £350 per ton.

“The pearling luggers of northern Australia are two-masted vessels, about fifty feet in length, equipped with sails and engines. The crew usually consists of two or three divers, men to look after the pumps, and a cook. The divers use the ordinary type of diving dress.

“The popular idea of the pearl diver’s life is that it is a languorous existence, lived under romantic conditions; but, on the contrary, the conditions are very hard. Often the boats are at sea for weeks, and even months, at a time, the divers descending every day. The heat of the sun is terrific, making it impossible at times even to stand on the deck. Fierce cyclones are also frequently experienced, causing losses of boats and men. In fact, there is probably no other part of the world which bears such a tragic history of cyclonic destruction as the far-stretching tropical coast of northern Australia. Cyclones are one of the gravest dangers the pearlers have to face; and some idea of what a danger these hurricanes are may be gained from the fact that since the commencement of the Australian pearling industry more than 230 boats have been destroyed by them, while the total death roll has exceeded 1,290 men! In one cyclone some years ago, a fleet of 77 boats was destroyed and 307 men were drowned.”

Yet the recuperative powers of the industry are such that even after Nature’s violent assaults it is soon on its

feet again, and the disaster of yesterday is forgotten in the promise of to-day.

In addition to this appalling toll, there are the hundreds of lives that have been lost under the sea—unfortunate divers who have met awful deaths at the hands of terrible ocean man-killers. Sharks, some ranging up to forty and fifty feet in length, are plentiful, and many divers have been killed by these monsters.

Spectacular figures abound along the pearling coasts and in the cattle country that comes down to them. Among them were two retired Royal Navy officers of the early days, named Chippendall and Hall, who made and lost fortunes in gems and shell, and now lie buried at Broome. One of their most romantic failures was an effort to produce cultured pearls commercially on the Montebello Islands, and tales of these communities and the doings there are still told in the North-West.

Of more recent and undoubtedly more solid fame was Captain Ansell Clement Gregory, who died in December, 1943, and left a comfortable little fortune to his only daughter. Pearling attracted Captain Gregory and his brother, Major F. C. Gregory, early in the present century, and they became owners of a fleet. In later years, Captain Gregory was interested in trading and primary production ventures all over the North-West. Physically vast, mentally alert, picturesque in speech and action, and afraid of nothing, he was in every way the Beau Ideal of a pioneer adventurer. During the last few of his sixty-four years of very active life, he was engaged on special wartime duties for which his intimate knowledge of the whole North-West, and of the Japanese who had for so long sailed its coasts, ideally suited him.

Just after the Japs had bombed Broome, early in March, 1942, one of the most amazing stories ever to come out of the wild north-west made banner headlines in the southern newspapers. But this time, it was a tale of diamonds, not pearls. A beachcomber named John Palmer, arriving in town to join the army, casually emptied on to the desk of Major Cliff Gibson, then

Military Commandant of the area, and formerly Crown Prosecutor in Western Australia, the contents of a small bottle—diamonds valued at about £300,000.

Palmer told how he had found them in a paper package half buried in the sand of desolate Carbot Bay, as he followed the coastline towards Broome. Telegraph wires ran hot while officials tried to identify the fortune, and eventually it was discovered that they were Dutch diamonds which had been part of the cargo of a refugee plane which had been shot down by the Japanese. Palmer was a hero, and all Australia talked about his find, and speculated on the difficulty of resisting the temptation to keep such easily won wealth. The sequel came on March 23, when Palmer was arrested and charged with having stolen diamonds valued at more than £20,000. Two North-West traders were charged with complicity, but a jury took only 30 minutes to acquit all the accused.

When brought to the surface by the divers, the oysters are opened and inspected for pearls. The pearls are removed from their shells, which are then cleaned and dried, sorted into different grades, according to size and quality, and sold to dealers at the pearling ports. These dealers pack the shells into long boxes of stout wood and ship them to America, Great Britain, and Continental Europe.

Most pearls have first to be skinned by a skilful craftsman, who removes the outer layer of carbonate-of-lime and exposes the full beauty of the pearl itself. Until recently there was in Broome a very skilled "peeler," whose reputation among buyers was world-wide. Not only did he carry out the skinning operation, but also the cutting out of a "blister" pearl, one which adhered to the mother-o'-pearl of the actual shell.

Shark Bay and Broome (Western Australia), Darwin (Northern Territory), and Thursday Island (North Queensland), are the home ports of the pearling fleets. They are picturesque towns with cosmopolitan

communities, including people of almost every race under the sun, most of whom were connected with the once great pearling industry, which had been the chief main-stay of the tropical Australian coast for nearly seventy years.

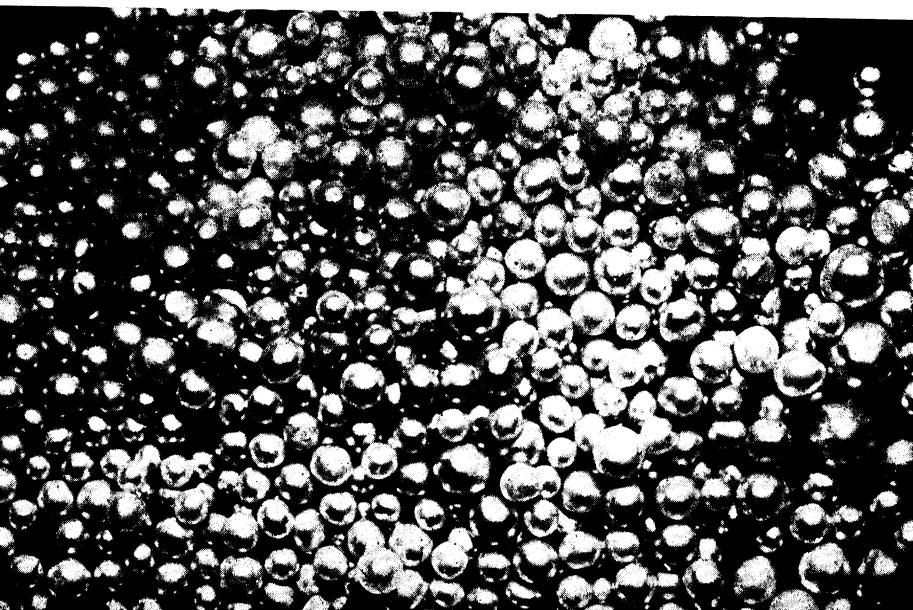
Here is an example of the secret power of romance, and of a life of freedom, to attract the most virile and determined of mankind. The same undefined force laid the foundations of Rhodesia, created the gold rushes which populated Western Australia, opened up Alaska and California, filled the covered wagons in their journeys into the old Wild West, and produced all the great human movements of modern times. It is as well to remember this power when planning the development of a new country.

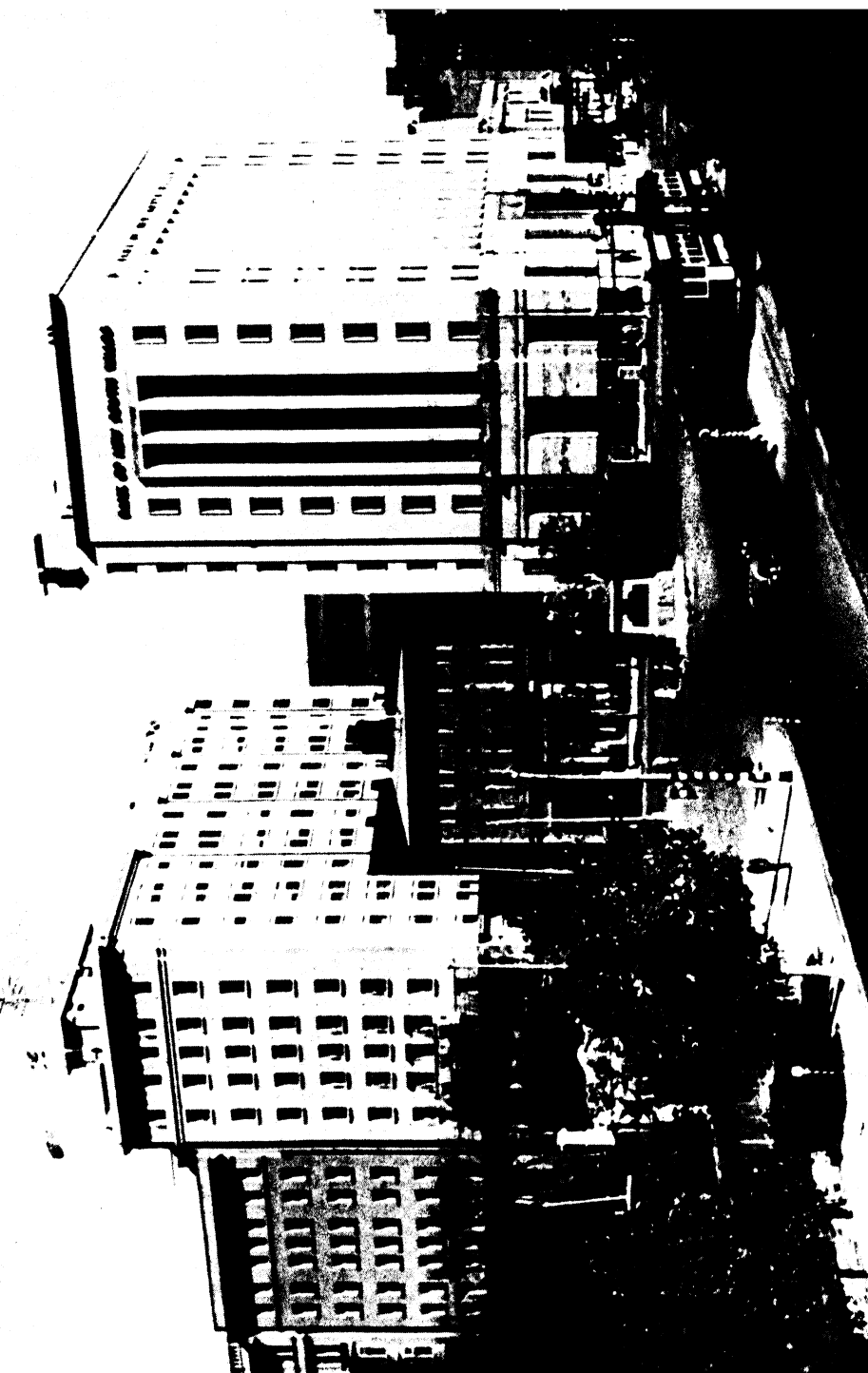
In these northern waters of the West there is, besides abundant fish of the edible kind, such queer creatures as the dugong and the trepang, or *bêche-de-mer*. I was told that the flesh of the former, which is not a fish but a mammal, closely resembles pork in flavour. Its skin is very thick, and leather can be made from it; while the blubber, or layer of fat beneath the hide, yields an oil which these men of the tropical waters say is far more efficacious than that made from the cod's liver, and is devoid of the sickening smell of this latter medicine. The trepang, or sea-slug, is much prized as a food by the Chinese. Whales in large numbers annually visit the north and north-eastern coasts of the Continent. A Norwegian company's vessel captured 3,009 of these in one season. Both the green and the hawksbill turtle abound on the islands and reefs.



Above: OPENING PEARL SHELL ON BOARD A LUGGER

Below: PEARLS FROM WESTERN AUSTRALIA





Chapter 12

ADELAIDE, WHITE CITY IN THE LAND OF WHEAT AND WOOL

EACH state of the Australian federation has grown up as a separate entity, connected with its neighbours only by an almost unpopulated and little-known frontier, crossed after a tiring and hot journey of several days in a train, often with one or more changes of coach ; alternatively there is, of course, the sea, which can be extraordinarily rough if the Great Australian Bight has to be crossed ; or the air, in which case one's luggage has to be sent separately by train or by luggage plane. It is with these thoughts in mind that I am approaching Adelaide, the capital of South Australia, for the second time, on this occasion, however, by the Transcontinental railway from Perth.

It would seem that a one thousand five hundred and fifty miles overland journey, almost in a straight line half across the Continent, and said to be one of the hottest and most dusty in the world, merits the recording here, while fresh in mind, of some notes regarding this and other even longer journeys in Australia. The first thing that I noticed on leaving Perth was that railway travel is not expensive if compared with either British or American journeys of equal distance. Secondly that, although hot and naturally somewhat tiring, this desert journey is nothing like as dusty as some that I have endured in both the Middle West of America and in the French Sahara. My first-class fare worked out at little more than twopence halfpenny a mile ; meals were quite good and cheap, sleeping accommodation was fair and portorage exceedingly bad.

Although this journey was of 1,550 miles, the east-to-west transcontinental line, which connects all five

Opposite—Adelaide, Capital of South Australia.

Australian state capitals on the mainland ; Hobart, in the Island of Tasmania, naturally being the exception ; has a total length of 3,300 miles—from Brisbane in the north-east to Perth in the south-west. The distances by railway separating the Australian capitals are as follows :

Perth to Adelaide	..	..	1,622
Adelaide to Melbourne	..	..	482½
Melbourne to Sydney	..	..	582½
Sydney to Brisbane	..	..	613

About one hundred and sixty miles east of Kalgoorlie the transcontinental line runs almost straight for over four hundred miles. The parallel lines of steel, gleaming in the vivid sunlight, traverse the bare limestone of the Nullarbor plain, with its sparse salt-bush, from one shimmering horizon to another, from dawn to dusk, almost until the salt lakes Everard, Gardner, and Torrens some two hundred miles from Port Augusta on Spencer Gulf are reached.

The coastal plain on which the glittering white capital of South Australia has been built rises gently at first from the seashore to foothills, then more steeply to low blue-tinted mountains. My eyes have grown tired of sunscorched landscapes, now, however, the third great city of this immense land lies all around me on its green plain. Adelaide has received many titles, such as " Garden City " and " Model City," all of which would have deterred me from coming had I not known, from a previous visit, that, like all attempts to apply a descriptive title, the impression made by a city is personal and not of the mass-production variety.

Happily this cheerful city is only model-like in its long, straight streets, originally laid out by a Colonel Light in 1836. It may be only a coincidence, but " Light " is certainly an appropriate name for the founder of Adelaide. It is the impression that this city makes on the newcomer. King William Street, North Terrace and the like are so broad and so long that the electric tramways are said to pay handsomely in Adelaide.

They are, however, really beautiful thoroughfares ; one is famous for its commercial buildings and shops, while the other has Government offices facing a double line of trim lawns and trees.

I think Adelaide is one of the brightest cities that the world has to offer, and it is quite untrue to suggest that the life of the people is rendered burdensome by the necessary taxes to make it either a model town or a garden city. True, there are some delightful spaces filled with trees, flowers, walks and lovers' seats—usually occupied by the aged and the unemployed. The Botanical and Zoological Gardens are certainly worth a visit, although the sunny sands and seas of Glenelg, the picnic-island of Kangaroo, and the flowers, trees and views from Mount Lofty, will occupy the days of those who have become tired, like myself, of the sameness and dull routine of city life.

Although Adelaide undoubtedly forms the natural gateway for the whole centre of Australia, to proceed inland from this city by the South to North line requires ample time and a very definite objective. In places, any move away from the railway would involve a complete camping and transport outfit. At present the vast centre of the continent is any man's land, because there are so few people on its surface that acres, or square miles, can be rented for a few coppers a year, which must be *sent* to the Government Land Office. For all practical purposes, however, it can be called an empty region about the size of Central Europe, which, amazing as it may seem, has still unexplored areas !

As a maritime port Adelaide cannot be compared to either Sydney or Melbourne. The city itself is situated on the banks of the shallow Torrens River, but Port Adelaide, on Salt Creek, is some miles distant from the heart of the capital, and it is here that ocean liners disembark passengers and cargo. As a commercial centre, however, its position is decidedly good, being surrounded by some of the most fertile land in this portion of the continent.

Adelaide, which has a population of about 375,000, is

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a well laid out and thoroughly modern city. Like all the capitals of the States of Australia, it possesses excellent public works and every modern convenience. The buildings are of solid construction, the streets broad and well-lighted. The chief seaside suburb is the town of Glenelg.

The founder of Adelaide was a most picturesque figure, a Colonel William Light. His father was the captain of an East Indiaman, who married the daughter of the Sultan of the Malay State of Kedah. Part of the gallant captain's dowry was the Island of Penang, which was subsequently transferred to the Honourable The East India Company. The son of this strange marriage was William Light, born in 1786. When only six years of age the child was sent to England to live with the Doughtys of Theberton Hall, Suffolk, England. At fourteen he became a midshipman in the Royal Navy. For some time he was a prisoner-of-war in France. In 1809, however, he transferred his services to the Army, and became an intelligence officer on the staff of the Duke of Wellington in Spain.

We next hear of him in the Egyptian Navy and as a friend of Captain John Hindmarsh, R.N. Eventually this latter officer became Governor of South Australia and Light was made the Surveyor-General. Besides being an able officer in both the Navy and Army, Light was an artist, administrator and the architect of the City of Adelaide.

Colonel William Light was one of those romantic figures, who, like Clive, Brooke, Rhodes, Gordon, Cochrane, and many others, laid the foundations of the British Empire overseas during the eighteenth and nineteenth centuries. He died in Adelaide and his statue stands today in the city he founded, while some of his pictures occupy an honoured position in the City's Art Gallery.

This State, which occupies a portion of the southern coast line, and extends inland to the centre of the continent, where it joins the old Northern Territory, has an area of 380,070 square miles and a population of over

646,216. Much of the interior is composed of vast plains, salt lakes, and low scrub ; splendid country for the rearing of big herds of cattle and flocks of sheep, and of undoubted mineral wealth, but of a peculiar topographical sameness. On the South Australian plains one may ride for days without seeing the slightest change in the general aspect of the country. Vast stretches of undulating sun-scorched prairie with occasional trees, roll away until lost in the uncertain haze of distance and heat. All through the garish noon the semi-tropical sun glares on the dry, cracked earth, and then sinks beneath the horizon in a blaze of flaming glory. Twilight lasts but a fleeting hour, and during the darkness which precedes the rising of the moon a feeling of loneliness takes brief possession of the traveller amid the silences of the Australian interior.

The edge of civilisation is, however, being slowly pushed further and further out on to the broad plains, and sheep and cattle are usurping the happy hunting grounds of the kangaroo and opossum. In the northern portion of this State, mining, cattle-raising and sheep farming form the chief industries, but in the south vineyards may be seen in many parts, and fruit-growing is rapidly increasing in favour.

The climate of the southern part of South Australia closely resembles that of Spain or Southern Italy. The weather for the greater part of the year is agreeable and balmy, with clear skies and bright sunshine. The winter season is, for the most part, mild, and something like a wet autumn in England. The coldest month is July, the mean temperature of which at Adelaide is 51.6. The average maximum temperature (or greatest temperature in the daytime) for July is 58.7, and the average minimum (lowest night temperature) is 44.4. The lowest reading ever recorded at Adelaide was 32.0, on 24th July, 1908. Winter mornings are frequently frosty, especially in the hills and high-lying plains. Snow is a very occasional phenomenon in the higher altitudes. The spring and autumn months, and a portion of the winter, are, however, generally marked by delightful

weather, and the rainfall during the whole period is excellent adapted for the agriculturist. Hence wheat-farming is one of the great industries of the country, though by no means the only one for which the soil is suitable. The average rainfall at Adelaide for the seven months, April to September, is 16 in. North of Adelaide the rainfall is lighter in character, and south of the capital it is heavier. The hottest months of the year are marked by clear dry heat, tempered by frequent cool changes. Some trying heat waves are often experienced, but, as the air is very dry, these hot spells cause merely temporary discomfort, and do not stop outdoor work. The mean 9 a.m. humidity at Adelaide in January, the mid-summer month, is 42 per cent. The mean temperatures in December, January and February are 71.4, 74.1 and 74.0 respectively. The mean maximum temperatures are 83.7, 86.5 and 86.0; the mean minimum temperatures 59.0 and 61.7 and 61.9. The highest temperature ever recorded at Adelaide during a heat wave was 116.3, on 26th January, 1858. These bursts of heat usually occur with dry north winds blowing from the interior. Near the coast, however, the summer heat is greatly reduced by cool breezes from the sea. Thus, at Adelaide, the prevailing direction of the wind in the summer months is south-west, i.e., off the sea. In winter, on the contrary, north and north-east winds prevail.

Twenty miles to the rear of Adelaide stands a ridge of mountains about 2,000 feet high; and dominating the entrance to the St. Vincent Gulf, which forms the ocean approach to the capital, lies Kangaroo Island.

The Gambier district, adjoining the south-western corner of the State of Victoria, is known as the "Garden of South Australia"; and it is here that the fruit-growing industry has attained a high degree of development. The chief city is Mount Gambier, which has a population of about 7,000, and is rapidly becoming one of the most important towns in the State. Dotted all over South Australia there are a large number of small

pastoral, agricultural and mining centres, mostly composed of wooden houses, with a population which seldom exceeds one thousand. The exceptions are : Port Pirie, with about thirteen thousand inhabitants, and Port Augusta, with four or five thousand. The only other towns of importance are : Kapunda, Gawler and Peterborough. All of these towns are on the railway running north from Adelaide.

Looking at the map of South Australia, one would naturally imagine the interior to be blessed with a magnificent system of navigable lakes and waterways. Large patches of blue denote Lakes Gairdner, Torrens and Amadens, and little streaks the Rivers Marshal, Hay and Todd. The truth, however, is that these lakes are salt-bogs, and the rivers seldom have a drop of water to cover their dry beds. Lakes Eyre, Gregory, Hope and Frome, are also salt, and situated below sea-level, which effectually prevents them from ever becoming the source of fine river systems, or of being of any material value for irrigation purposes. Nevertheless, the surrounding country, although dry, is covered with excellent pasture, and affords magnificent grazing ground for the ever-increasing herds of cattle and flocks of sheep.

The interior of South Australia is crossed by railways and telegraphs, and the important towns, as well as many of the small pastoral centres, are connected with the capital, and also with other States by an extensive network of lines, which will do more than anything else towards bringing population and prosperity to these vast tracts of pasture land.

The total area of South Australia in acres is 243,244,000. The unoccupied areas amount to about 90,500,000 acres. Vast areas of country in various districts are being surveyed by the Government and thrown open to settlers. There are, in addition, thousands of square miles of pastoral land being offered for selection. This State is the chief exporter of wine in the Commonwealth.

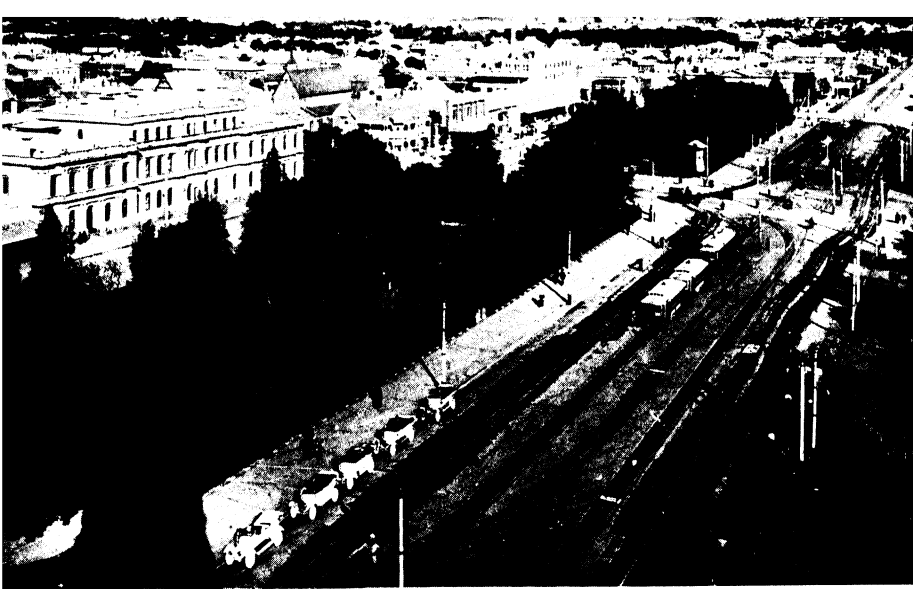
The wool industry of South Australia dates back almost to the foundation of the State, and to the South Australian Company the credit is due for the first

introduction of sheep. This Company purchased pure-bred Merino sheep from Tasmania and New South Wales, in addition to a number of rams from Saxony. About the same time Leicester and Southdown sheep were also introduced by the Company, but the Merino proved itself best adapted to local conditions, and has ever since remained the principal breed. In addition to these importations, large numbers of sheep were brought from the neighbouring States by the pioneer pastoralists, and within about four years the South Australian flocks totalled 200,000.

The first shipment of wool was made at the end of 1837, and consisted of 4 bales; within ten years the exports exceeded 500,000 lb., worth £75,000; and now the number of sheep in this state exceeds eight million and the average annual production of wool amounts to over one hundred million pounds.

No description of this State would be complete without some account being given of life at the sheep stations on the wide plains of the interior. South Australia, moreover, is the natural jumping-off place for the vast and but little exploited territory of Northern Australia. These subjects, however, must be left for future pages.

The mineral resources are not nearly so great as those of New South Wales, or, in fact, most of the other states. Copper is the chief mineral, and its average annual production exceeds in value a million pounds a year. Wool has been the mainstay of South Australia since the 'eighties of last century.



Above : ONE OF ADELAIDE'S BROAD BOULEVARDS FROM THE AIR

Below : SPENCER GULF, SOUTH AUSTRALIA
The waterway to the iron, wheat, and wool ports





WAGGONERS ON THE TRAIL, BRINGING WHEAT TO THE RAILHEAD

Chapter 13

A HOMESTEAD ON THE OVERLAND

"THERE is still an unknown continent, I mean the vast interior of my own country, Australia." These were challenging words, the beginning of a conversation with the late Frank Russell of the *Melbourne Age*, which roused in me a desire to obtain a glimpse, at least, of the so-called "dead heart" of the centre of Australia. And so, when I found myself in Adelaide, refreshed by the sea air of Glenelg and rested by sumptuous ease in a beautiful and friendly house on Mount Lofty, it seemed that the one, and probably the only, opportunity I should ever have, was presenting itself when an invitation came to visit a large sheep station in the outback from Copley station, four hundred and fifty miles north of Adelaide by railway and then some by car, along the great "South-to-North" rail and road highway which leads across Australia by way of Oodnadatta, Alice Springs (and then seven or eight hundred miles by military road) to Birdum and, finally, by narrow gauge railway to Darwin, on the Timor Sea.

This, at present, is the only organised way into the vast Northern Territory, an area estimated to be about 523,620 square miles, in which live a few thousand aborigines, some Asiatic traders, and about eleven thousand white people. Other than blazed cattle trails, for thousands of beasts come south from Queensland as well as from the big stations beyond Alice Springs, only the line of the Overland Telegraph marks the route across the continent. Where South Australia merges into the Northern Territory, about one hundred miles north of Oodnadatta, there is only the invisible state

boundary ; and so, for the purposes of description here, this will be ignored and in succeeding pages we shall pass from South Australia into the vast interior.

The railway journey north from Adelaide does not call for much comment, as there is a great sameness about the scenery after the first two hundred miles have been traversed. The country beyond Adelaide is covered by vineyards ; then the line passes through nearly two hundred miles of wheat fields, composed of undulating plains with distant gold and misty blue ranges that fade in hot mist and space into the brazen, cloudless summer skies. On some of these mountains snow is not unknown in winter ; but already it seems impossible to think of anything so cool and refreshing as either a frosty morning or a snowy day.

After passing through the little township of Peterborough, a railway centre and junction for the Broken Hill Mines, the line addresses itself in earnest to the salt-bush country. Hereabouts, midsummer temperatures of well over 100 degrees F. are by no means uncommon, but, although the sun dazzles from a white hot sky, there is little moisture in the air. Towards evening the salt-bush turns to a dull grey and only in the moonlight, when the distant Flinders Range is tinged with silver, can the scenery be called anything but appallingly monotonous.

Quite suddenly, towards evening on the second day of my journey northwards, the scene changed. Out of the brazen sky came a dark cloud of dust, red dust, which forced its way into the train, bringing it almost to a standstill. In about fifteen minutes it cleared away, but was followed by a number of dust devils, or, as they are called in South Australia, "willy-willies," moving rapidly over the plain to the westward of the line.

Copley appeared to be little more than a wooden station in a sand and salt-bush waste. From this unattractive little place a long and bumpy car drive landed me in a substantial one-storey building situated in the foothills of a spur of the Flinders Range. It was approached by a drive between lines of dusty pepper-trees,

interspersed with single, dull, greyish-green bushes. Nearby were three immense sheds, one of which, I was told, was the "barracks" of the boundary riders, fencers and shearers, another was a store, and the third was a shearing shed. Close to a fenced enclosure there was a long but roughly made sheep-dip. The house itself was a single-storey building raised some three or four feet above the ground. Inside, the appearance was comfortable, but the furniture was very old-fashioned, almost of the early Victorian type, and, I thought, somewhat unsuitable for the prevailing heat and dust.

I was told that fifty miles away was the track along which passed all the cattle coming down on the hoof from Western Queensland; and that, although Copley was the most convenient station on the railway-line, there was quite a nice little town in a fold of the hills about sixty-five miles away. Surprises came soon. Instead of vast flocks of sheep being visible all round the station, as I had imagined, they were spread out over fifty square miles of country in one direction and ninety square miles in another. That rabbits, of which there were countless thousands, were more dangerous than droughts, as they ate up what little grass the sandstorms did not cover. That this station was considered to be over-stocked with an estimated twenty thousand sheep. That water was obtained from five artesian wells and a number of storage tanks; and that household and other supplies came in about once in every three months.

The pastoral areas of South Australia may be roughly classified into three types: (1) the saltbush plains of the north, where the average rainfall is low, and large areas are unoccupied. Water conservation and careful stocking are the chief factors in the profitable utilisation of this country. (2) The well-grassed plains and hilly country of the north and middle north. The conditions of these districts are more favourable, and the carrying capacity greater than is the case with the salt-bush country. (3) The south and south-east comprise a different class of country. The rainfall is much heavier and the herbage more luxuriant. South Australia enjoys

a remarkable immunity from serious losses of sheep by disease. In 1860 there were 20,135,286 sheep in the whole of Australia, and now it is estimated that the annual average, allowing for disaster, such as floods, and for animals sent to the refrigerators, is about 120 millions, producing a fourth of the world's annual wool clip, which averages 1,130 million pounds.

Watching the tellers on this station count in fours and sixes the hundreds of sheep—as they passed through the antiseptic dip—without falling asleep, or forgetting the “number they first thought of,” was a source of continuous amazement. I tried it and failed utterly. On one or two occasions while riding, or being driven in a high-wheel-base car, to what were called the “Northern pens,” I saw cattle that had come on the hoof for hundreds of miles, from one spring or artesian well to another, without the commissariat for either man or beast usually required for moving a mere squadron of cavalry over but a fraction of the same distance in a civilised country. It seemed to me, then, that this might well account, in part, for the brilliant successes of Australia's armies in the northern deserts of Africa and in the steaming jungles of Burma and insect-infested New Guinea. Than which there is no greater epic in the annals of British military achievement.

Much of the Australian interior is occupied by vast waterless plains, such as the Great Sandy Desert in Western Australia; Old Man Plain, situated north of the Murray river, which divides the States of Victoria and New South Wales; the Stuart Plains, near Mount Stuart, which is considered the exact middle of the continent; the Victoria Desert, and the Nullabor Plains. These vast stretches of arid waste are almost entirely devoid of grass and trees; for leagues nothing can be seen except a monotonous succession of sandy hillocks covered with salt-bush—a growth which prevails throughout the whole interior of Australia.

There are many kinds of salt-bush, but the predominant one is much like English spinach, and affords excellent food for cattle and sheep during the

droughts which are the curse of the plains of central Australia.

On the Victoria Desert and the Great Sandy Plain, nothing grows except the coarse quilt-like grass known as spinifex, and a few gum or eucalyptus trees, which afford but little shade. On these great stretches of sand the sun beats down with tropical heat, not even night-dews moisten the ground, and rain is unknown. The only oases are salt-lakes, which exist in many parts of Australia, and afford no relief to the parched ground or the thirst of man and beast. Sand-storms are the scourge of these regions.

Not far from this station—as distances are reckoned in the Australian interior—there are a number of salt-lakes, or dried-up pans. One of the largest hereabouts is Lake Eyre, which covers nearly five thousand square miles with swamp and salt-encrusted flats, extending as far as it is possible to see. Eyre lacks the impressiveness of the blue and sea-like Canadian lake of similar name; and there seemed no point of vantage from which this immense, below sea-level half-dry swamp, gleaming white in little strips and patches through the grey-blue heat-haze, can be viewed from the edge nearest to Marree, the quaint little township on the overland trail of old-time romance. Here, in our grandfathers day, races, dances and other gaities by the station owners, who came into "town" from far and wide over the plains of South Australia, were of frequent occurrence. On the walls of the sitting-room in one of the houses which I visited there was an old faded oleograph of a ball in the outback to celebrate Queen Victoria's Diamond Jubilee. It reminded me of the Australian song of those days, "Waltzing Matilda." When I was very young an uncle, home from "the Antipodes," gave me a sandalwood box that was given to him with other curios at Broken Hill.

The less barren plains are covered with coarse grass, salt-bush, scrub and clumps of eucalyptus trees, which are characteristically Australian. These giants are often over three hundred feet high, and, although evergreen,

afford but little shade from the blazing sun, which gives the earth and grass a parched appearance and casts a hot golden glare all around. A haze overhangs the distance and the intervening plains flicker in the hot dry air; gaunt blue gums rear their heads towards the colourless sky, and the river-beds are as parched as the sands of the Sahara. Nature stands still in the sweltering heat; occasionally a shrill "Coe-ee" will sound from some far off sheep-run or cattle station, and huge white or black patches on the sunlit plains denote the gigantic herds and flocks grazing on the coarse dry grass.

The upland plains, which occupy by far the largest portion of the Australian interior, are sprinkled with dwarf-gums, callia mallee, tea-trees and acacia, which provides not only drink for travellers and food for beasts, but also wattle for fences. Kangaroos, opossums and rabbits form the principal denizens of these regions.

Although, even in the arid belts of the centre of the continent, which has been termed the "Dead Heart of Australia," the cultivation of certain commodities is by no means impossible; and it is a lucrative business to rear large herds of cattle and flocks of sheep, which do not suffer much from the drought if the locality is carefully chosen, and adequate provision made to tide over this period; at present, population and industry only fringe the enormous coastline, which is swept by cool breezes and blessed with a fair rainfall.

The condition of the interior is, however, being rapidly changed by the introduction all over the country, of artificial methods of irrigation. In Queensland, alone, considerably over 600,000,000 gallons of water are daily obtained from artesian wells, and in West and South Australia fresh borings are constantly being made. There are also big schemes in varying stages of maturity for the employment of reservoirs, canals, barrages and other extensive irrigation works, which are all that is needed (except population) to make what is now fallow land highly productive and revenue-producing territory.

Chapter 14

AWAKENING OF THE OUTBACK

FOR the adventurous, Australia offers a magnificent opportunity. It is possible to leave the cities and presently find a wilderness almost primeval. That in the Northern Territory there is still a challenge to the explorer and prospector is proved by the recent discovery of uranium, the establishment of vast cattle ranches and the building, during the war, of the highway connecting the township of Alice Springs—railhead in the south—with Dalney Waters, or Birdum—the beginning of the steel road to Darwin in the North. To the sportsman looking for new fields to conquer there are, on the vast plains of the far North herds of wild cattle, or buffalo, which offer fine sport. The animals originate from stock lost in a shipwreck on the way to Sydney over a hundred years ago, and they have multiplied into large herds of truly wild beasts.

Darwin, capital and chief port of the Northern Territory, only 1,900 miles by sea from Singapore, has become one of the great air bases on the Empire route. It can now be reached from all parts of Australia within a few hours. The extension of the railway, from South Australia northwards to Alice Springs in the centre of the continent, has given yet another impetus to the exploitation of this once "dead heart" of Australia.

There is now a direct rail and motor road from Adelaide to Darwin, crossing the continent—a distance of about two thousand miles. To whatever part of the world modern transport is given, the surrounding land awakens from its primordial sleep. Along the whole of this North-to-South Australian highway there are as yet few signs of the presence of capital, organizing ability, or

of population. What opportunities await the coming of the enterprising, the venturesome and the farsighted ! To-day a whole county can be acquired for the price of a garden of fifty years hence. Only the hardy and the adventurous should go there, however ; but to the would-be pioneer, the maker of nations, what a marvellous opportunity.

As it is the purpose of these pages to be helpful to those desiring something more than pretty words, I propose giving in greater detail than is necessary in the case of the more widely known regions of Australia, the information on the Northern Territory which, with the always ready help of the Government, I have been able to obtain.

The combined length of this belt of country, from north to south, is 900 miles, and the breadth from east to west, is 560 miles. It is four and a half times the size of Great Britain and has an area of 523,620 square miles. With the exception of a strip of territory 150 miles in width, it is entirely situated in the tropics. The old name, Northern Territory, has, to Australians particularly, not stood for progress. One explorer, however, after taking an expedition through the country and after having seen the great stretches of fertile land awaiting settlement, suggested it should be renamed Kingsland.

In 1881 there were fewer than 670 Europeans in possession of this vast area, and in 1948 there were about 10,866 white people. There are several thousands of natives in the interior, and some of them are engaged on the cattle stations, but the great bulk prefer the roaming, lazy life. Where they come into touch with civilisation they seem to be dying out.

In 1863 the Territory was annexed by South Australia, and was administered by that State until 1911, when it was transferred to the Commonwealth, or National Parliament. It is now controlled by that authority, and it will be seen that its development is more a national problem than one for any individual State.

As early as 1817 the coast—1,040 miles—was surveyed by British officers, and in 1840 a British force was sent



OLD "BULLOCKIE" STILL DRIVING HERDS OF CATTLE ALONG THE



Photo Australian Government

Above : RANCH LIFE IN AUSTRALIA

"Cutting Out," or separating certain animals from herd

Below : A HORSE SALE.

An old time scene on the "Overland," Western Queensland







ABORIGINES OF AUSTRALIA

there, or to an adjacent island, but the position was afterwards abandoned. In 1861 Stuart, one of Australia's most daring explorers, pushed his way right across the continent from south to north, a distance of nearly two thousand miles, and along his route a telegraph line was built which cost £500,000. This made the first connection by telegraph between Australia and England, *via* Darwin. During Stuart's journey across the continent, and the subsequent construction of the telegraph line, it was found that the country possessed well-grassed pastoral lands and mineral resources that were likely to prove of value. Large areas were taken up for pastoral purposes and spasmodic attempts were made to test the mineral deposits, but it is claimed that up to the present these have not been given anything like a fair trial. Chinese miners from time to time in a most haphazard fashion worked on the auriferous areas in the north, and went back to their native land. They probably took with them enough gold to maintain them for the rest of their lives. English companies were formed years ago to work some of the mines there, but most of the capital seems to have been spent on elaborate surface equipment and machinery without first testing the mineral deposits.

Up to quite recent years there was probably not a mining shaft more than two hundred feet deep, and when it is realised that in other parts of Australia payable minerals are being obtained at a depth of two and three thousand feet and more, it will be seen that this vast area has surely not yet had a fair trial. The slipshod, uneconomic methods of the Chinese fossickers are the chief characteristics of the mining work in several parts, yet it is known that almost every mineral has been found in different places and varying quantities.

When the Commonwealth took over the control of this area, it also assumed the responsibility for the indebtedness that had been incurred on behalf of it by South Australia, chiefly in building railway lines from the South Australian railway system north to Oodnadatta, and from Port Darwin south to Pine Creek. These two

sections now form portions of the north to south trans-continental line, which the Commonwealth Government also undertook to construct in accordance with the terms of transfer from South Australia. Recognising the responsibility, and knowing that in the past little or nothing had been done properly to develop this important part of the Commonwealth, the Australian Government at once adopted a very active policy in respect to it. They had taken over a debt of three millions, interest on which had to be found, and they soon set about making preparations for permanent and successful settlement. It would have been easy, as one of the ministers said, to make up an alluring prospectus by culling extracts from reports and by chartering steamers to convey people so attracted to the Northern Territory, to have populated the place, but to make colonisation a success it was necessary that thorough inquiry should precede action, and that before people were invited to go there, definite avenues of employment should be found for them. Experts were instructed to make exhaustive investigations, and most of their reports have been furnished. They are decidedly favourable.

Foremost of all considerations was, of course, the question of the climate, in so far as it affected the health of the residents; for, no matter how rich the minerals or how fertile the soil, if the country itself would not sustain the health of the people it could not be regarded as the future home of a white race. The results showed that the health of the people there was remarkably good. Although in the tropics, no diseases such as malaria or dysentery, generally so common in hot countries, were endemic in the Northern Territory, and life in the interior was healthy. Though in the torrid zone, the country was not, owing to the absence of jungle, tropical in nature.

In 1927 the old Northern Territory ceased to exist from an administrative point of view. This country was divided into North Australia, with Darwin as its capital, and Central Australia, with Alice Springs as the administrative centre.

In 1932-3 the old title of "Northern Territory" was, however, restored. Certain parts of these territories are quite suitable for tropical agriculture, and the Commonwealth Government grant areas to settlers rent free for the lifetime of the settler.

The railway line from Darwin extends southwards for about 360 miles to Daly Waters. Alice Springs, reached by railway from Adelaide, is pleasantly situated in the MacDonnell Ranges and enjoys a particularly fine climate. The two railheads are connected by a motor road about 750 miles in length.

In an annual report the Government medical officer for Darwin said the climate was equable. The highest temperatures were recorded just before and after the wet months, when the mean maximum dry bulb temperature was about 94 degrees F. and the wet bulb in the neighbourhood of 80 degrees F. These, however, were the least pleasant months. During the wet season, from November to March, the mean maximum dry bulb reading was 90 degrees and the wet bulb 83 degrees. The minimum temperatures for these months (mean) was 77 degrees F. ; the lowest temperatures were recorded in July, when there was a mean maximum dry bulb reading of 67 degrees.

The moist heat of the wet season, in persons who did not take sufficient exercise, was productive of a feeling of languor and a distaste for exertion, either physical or mental. To those who took exercise, however, these months, though they could not be called bracing, were far from being unhealthy. The health of the community generally was as good at this time of the year as at any other.

The dry months were characterised by a succession of bright, warm, sunny days, followed by cool nights. The relative humidity was low and energy correspondingly increased. The climate during these months, the medical officer stated, was little short of perfect.

To people of ordinary health, who did not neglect the necessary daily exercise in the open air, and who were moderately temperate in their habits, the climatic

conditions of Northern Australia were absolutely compatible with the continued maintenance of the highest standard of health.

Work in the tropical part is certainly more arduous than in the temperate climates, and the heat during the midday hours is at times great, but there is not the least necessity for working during these hours. For those in the open the commonsense principle is that of an early beginning to the day's work, with a prolonged rest during the hot midday hours, work being resumed later in the afternoon and carried on till sunset. In this way eight hours work per day may be maintained during the hottest weather under perfectly agreeable conditions. This noon-day siesta is, of course, no new scheme or suggestion. It is observed by Europeans in many tropical countries. Investigations showed that the second generation did not display any signs of degeneration as the result of residence there, and in most cases the children, although they exhibited a somewhat pale skin, were as well developed as those of temperate climates. Sickness was rare among the children and the mortality rate low.

On the northern coast, as in the tropics generally, there are two climatic changes. The wet season is from November to April, and the dry from May to October. The changes are uniform and regular. Immediately after the vernal equinox the wet season is heralded by the cessation of the east-south-easterly monsoon, which gives place to calms and light variable winds. Intensely hot weather prevails for a few days, then thunderstorms occur frequently until the end of November, when they come daily, as much as an inch of rain falling during each storm. During December the north-west monsoon sets in gradually and then the rain comes daily until the end of January. The monsoon dies away and is followed by light variable winds until April, when the dry season commences again. Nearly the whole of the rain falls during the summer months.

The rainfall varies from sixty inches in the tropical north to five inches in the arid southern portion, and the capacity of the different parts of the country for carrying

stock varies as widely as the rainfall. In the north there is an abundance of moisture and fine rivers. In the south the rainfall is scanty and occasional, and the rivers justify their names only for a brief period each year.

The Institute of Tropical Medicine has taken up the question of the effect of the climatic conditions upon the health of the white people, and, as population increases and settlement extends, scientists may be expected to have ready the means for preventing or at any rate minimising the effects of the outbreak of tropical diseases. There is increasing evidence that tropical diseases are not so much the result of tropical conditions and climate as of minute parasites, with which it is possible to deal just as with the germs of other diseases. It is only fair to expect that the Government and the health authorities, if they are anxious to induce white people to settle in those parts, should assure them that they will be safeguarded from a health point of view, and that the coming generations will not be impaired in health as the result of residence in the tropical north.

It is agreed that the conditions in Northern Australia are very different from those obtaining in other tropical parts of the world, and that it is rather a question of *will* white people settle there than one of *can* they.

At the opening of the Institute of Tropical Medicine in Queensland, the Governor of that State in referring to the value of the study of tropical diseases and their effects upon the white races, said the question was one of far-reaching political importance and round it would centre the destiny of tropical Australia, if not of the whole Commonwealth, for there was little doubt that, if the northern part of Australia were not effectively held by Australians, or by white people, it would at no very distant date be occupied by an alien race that might threaten the very existence of the Australian people. This would seem to be a matter that concerned the Empire as a whole and not Australia alone.

The next question one would reasonably ask is, what is there to encourage white people to go there ; what are the resources, the opportunities, the possibilities ?

More than a single chapter is required adequately to present these. Every year, following up the development of the country, there should be unlimited opportunities for industry and enterprise.

Darwin, the capital of the Northern Territory, from its geographical position, is surely the front door of the Continent, if the markets of the north, east and west are considered, and should become the chief port of Australia's trade from the north. It is situated on a promontory raised some fifty feet above the sea-level, with steep perpendicular cliffs covered with dense cultivation. Port Darwin is a magnificent, open, deep water harbour, extending fanwise many miles into the sea. The town is so situated as to be surrounded on three sides by the sea, and occupies a most advantageous position from hygienic points of view. It is laid out with broad open streets, running at right angles, and the building areas are cut regularly with a street frontage of one hundred feet by a depth of two hundred feet. The town is well provided in the matter of open spaces and reserves, and its elevated position with regard to the sea ensures a plentiful supply of pure air for all parts. The cliffs are beautifully wooded, and the provision of recreation facilities and of open-air entertainments for the evenings, when the people should be out in the open as much as possible, will add to the attractiveness of the place and to its health. Darwin is the headquarters of all operations, and the official residence of the Administrator. It is now an important base on the Empire Air Route.

It has already been stated that one of the chief drawbacks to the development of this country has been its geographical isolation. Those who have gone up from southern Australia were to a certain extent cut off from all previous associations and connections. There certainly was a mail service, but of the three boats that served to carry the mails one ran monthly and the other at irregular intervals, so that one could correspond with people in London from certain parts of Australia more easily than with people in this northern territory.

Inland there was a quarterly mail service between

Darwin and Boorooloola, and a half-yearly service between Roper River and civilisation, so that the young man on the Roper River with a sweetheart in Melbourne need only trouble about writing twice a year. There was also a mail service every two months between Darwin and Wyndham on the north-west coast of Western Australia.

The postman or mailman's lot was by no means a happy one. He started out from Darwin, and from the Katherine telegraph station went south as far as Renner Springs, a distance of many miles, and probably would not meet a living soul on the way. Then he went off easterly to Anthony Lagoon, many miles, where he would meet the Queensland mailman. Frequently these men have had to swim streams in flood time. One of the best known characters in these parts, a man who had carried the mails for years over the lonely places, and whose rugged appearance was always welcome at the outback stations, lost his life in trying to cross a stream in flood-time with his mail bag. Now, a more frequent service has been provided along the coast, and the construction of the north-to-south transcontinental road has done more than anything else to break down this isolation and make accessible valuable tracts of country hitherto beyond the reach of the mining prospector or the settler.

Pioneering life there under the old order was certainly lonely, and there was perhaps a natural tendency to become melancholy, although on the few big, successful stations the conditions were comfortable and time passed fairly merrily.

It is difficult to decide the most attractive features of the industries there. For years it has been recognised as a fine country for horse and cattle-raising, but the lack of transport facilities has retarded progress. It has been necessary to drive cattle overland for hundreds of miles to the adjoining States to find a market. In the long, tedious journey heavy losses were sustained, whereas, if these cattle could be sent by rail direct to either the southern or the northern ports and there slaughtered, frozen and exported, a larger trade could be done. This

the transcontinental railway and road alone has made possible. From Darwin it should be easy to send large quantities to America regularly as well as to the hungry markets of Europe and the East. India takes large numbers of horses annually for military purposes, and given proper facilities no place should be better able to supply these than Australia.

Mr. Wells, Northern Deputy Commissioner of Land Tax in Australia for many years, spent a long time in these territories, and he stated that in the Victoria River district, and east from that river's source there are 20,000 square miles of fertile valleys and downs highly suitable for horse and cattle raising. In the vicinity of Sturt's Creek there are similar lands in large areas. For the most part natural waters are plentiful.

From the south-east corner of these belts of country, for a distance of 150 miles north, there are parallel ridges suitable for raising sheep, cattle and horses. Fine pastoral land also extends from Cammowear right through to the Anthony Lagoon and on to Newcastle Waters.

Physiographically, the country down to the Roper River practically comprises one vast plateau about 1,000 feet above the sea-level, intersected here and there by perennial rivers with rich alluvial flats often as much as forty miles wide, land specially suitable for cattle-raising. Beyond the Macdonnell Ranges in the centre of the continent, there are large areas of table-land to the east and west, including the Barclay Table-land, suitable in parts for sheep. Only the isolation of this country has prevented its progress. The climate is right and the soil is right, but there have been no facilities for getting the products to market. Thousands of head of cattle could be raised if it were possible to take them economically to civilisation.

There is no doubt concerning the capacity of the country near the northern rivers. The geologist accompanying one expedition says: "In no part of the world have I seen grass grow so luxuriantly. An aggregate of five million acres came under the observation of the

Opposite—Natives of the Northern Territory, hauling a big turtle on board a dug-out canoe.

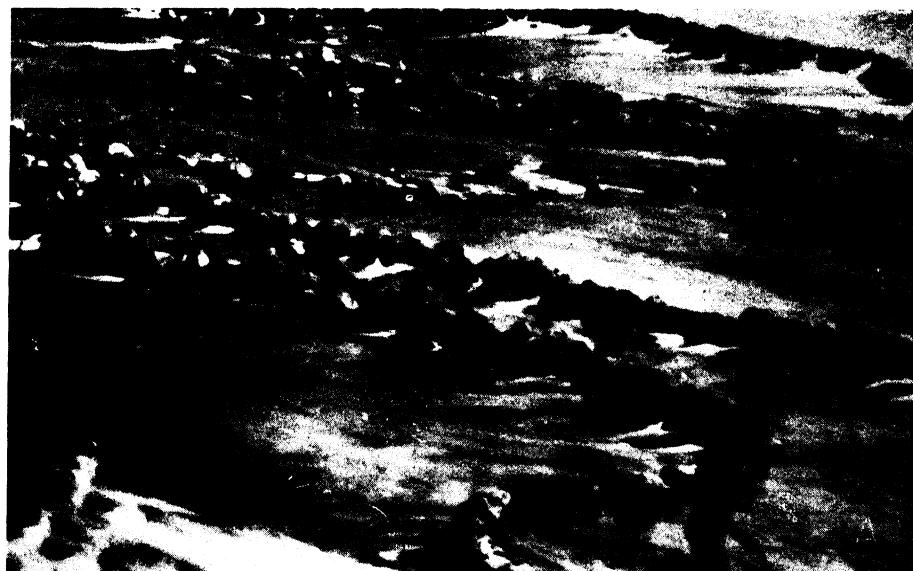




Above : ABORIGINES DANCING

Below : NATIVE FISH TRAP

A maze of rocks is placed across the river so that the fish coming down with stream are trapped in the "blind alley" and easily captured by spear or net



party, all well-watered pastoral lands." This opinion has been confirmed more than once by others, and one visitor declared that the Victoria River country contained some of the finest pastoral lands in Australia. The Victoria River station alone carries over 100,000 head of cattle. In one season as many as 30,000 calves have been branded. This is probably one of the largest stations in the world.

There are in these territories approximately 31,000 horses, 960,000 cattle and 25,000 sheep. Although little or no dairying has been carried on yet, the country is well suited and the establishment of factories and facilities will help this industry materially.

At the Batchelor Farm, which is situated close to the railway, about fifty-seven miles from Darwin (an experimental farm controlled by the Government), it has been proved that sheep, cattle and pigs will thrive, and that various fodders, such as lucerne, maize, sorghum, cow pease, oats, and sweet potatoes, which are suitable for them at all seasons of the year, can be grown successfully, also that the natural pastures are susceptible to vast improvement by stocking the country.

All these great tracts of land are available on very easy terms. Pastoral lands are divided into three classes and the maximum area which one applicant may take up is 300 square miles for first class, 1,000 square miles for second class, and 1,500 square miles for third class. In agricultural lands one may hold 1,280 acres of first class or 2,550 of second class, and for mixed farming, 12,800 acres of first class and 38,400 acres of second class land may be held by one settler.

Pastoral lands are granted for fixed terms instead of in perpetuity. Lands may be held under leases for terms varying from twenty-one to forty-two years at a peppercorn rental, and the holders are expected to effect certain improvements in a specified time.

In order to assist the settlers the Government provide funds under which advances are made. Money is advanced by the Government on mortgage and the settler pays as he is able.

There are numerous rivers, some of which are navigable for a considerable distance, sometimes up to one hundred miles. On the head waters of these and their tributaries there is splendid country where mixed farming could be carried on. Mixed farming in this instance, includes the growing of tropical products and the breeding of certain animals such as the angora goat and pigs. It is also claimed that the area suitable for tropical growths is about the size of Java (the tropical garden of the world) and Madura combined.

The Roper and Katherine Rivers are the principal streams. The former, being fed by large springs at its source, it should be possible, by the making of locks, to render navigable for very long distances, while immense volumes of water would be available for irrigation.

Dealing with the Victoria River, Captain Carrington has said that from the point of view of its capacity as a harbour and its easiness of access it is superior either to the Thames or to the Mersey, and the land of which the river is the natural outlet comprises about ninety thousand square miles.

In their work entitled *Across Australia*, Messrs. Spencer and Gillen say that all that is necessary to transform the greater part of the centre of Australia into a valuable territory is firstly some scheme of water conservation on a large scale, and secondly adequate means of communication with the coastal ports.

All kinds of tropical fruits grow to perfection in both the north and centre, and splendid specimens of fresh fruit have been produced from Alice Springs.

In the southern states of America rice has been grown successfully with white labour and up-to-date machinery, and in the same way white labour should succeed in these regions. Even in the western part, one member of the Federal Parliament stated that the land was superior to portions of Canada. No comparison, he said, could be made between a country where the stock had to be housed several months every year and one like Australia, where the stock thrives all the year round in the open and practically on the natural grasses.

A well-known geologist, the Rev. T. E. Tenison Wood, after many years of exploration work said : " I confidently assert that the Northern Territory is exceptionally rich in minerals, only a small portion of which has been made known to the public. I do not believe that the same quantity of minerals, veins of gold, silver, tin, copper and lead will be found in any equal portion of Australia. In fact, I doubt if many provinces will be found in any country so singularly and exceptionally favoured as Arnhem Land in respect to mineral riches. Of the mines that have already been worked, for gold especially, they cannot be said to have gone to any depth, but nearly all have shown unusually good ore, and it is unquestionable that not twenty-five per cent of the veins visible have been worked at all. Years will not exhaust the discoveries to be made there, and when the difficulties of labour (population) have been overcome, Arnhem Land will be one of the greatest mining centres in Australia."

The Government is doing a good deal to develop the mining industry. Licences are granted giving miners exclusive rights to search for minerals in areas not exceeding five miles of Crown Lands. Prospecting areas may be declared by the Administrator, and if a Government prospector discovers payable minerals the area may be worked on behalf of the Government. Reward claims as well as cash may be granted to the discoverers of new mineral areas. For the establishment of new mining towns, as the result of mineral discoveries, rewards are also to be paid in sums up to £5,000. Subsidies may also be granted to miners by the advance of money or the loan of Government machinery. Mining is also encouraged by the payment of rewards for the invention of new processes for the treatment of minerals.

In addition to gold, copper, wolfram, tin, silver and lead have been found. The minerals produced in one year have been valued at £126,000, and for that year only 259 miners were at work.

The greater part of Australia was originally occupied by a number of aboriginal tribes, who lived in distinct

communities. Although they were expert fishers and hunters, and were skilled in the use of implements of war and the chase, no traces of agricultural instinct have ever been discovered in them. As regards their laws, habits, customs and language, the tribes were very diverse. Since the advent of the white man, the natives have gradually decreased in number, and have now been practically submerged by the wave of civilisation which has spread over the country, notwithstanding the many attempts which have been made by the States, as well as by private individuals, to regulate their lives and to promote their welfare. The total number of aboriginal natives at present in Australia may be roughly estimated at twenty thousand. The whole matter, however, is involved in considerable doubt.

Special arrangements have been made for dealing with the natives. Numbers of these are employed on the stations looking after sheep and cattle. They make good shepherds and are paid only a small wage. Their employment is also controlled by the Government, so that there shall be nothing approaching slavery. For those who are not inclined or not able to do this kind of work, areas are reserved, and to these particular areas they are supposed to keep. Protectors see that they are provided with food and taught to cultivate the land. Where they come into touch with civilisation they often pick up the vices of the "whites" and are slow to adopt the more worthy habits and customs. So far as this territory is concerned they are not a menace, but as larger areas of land are taken from them or absorbed, it is only fair that some provision should be made for them in return.

Most types of Australian fauna are to be found in this region, with crocodiles and fresh-water tortoise in the northern rivers. Water frogs are common inland. Fresh water fish also abound in some of the rivers. The white ants are a pest. Anthills sometimes reach a height of twenty-five feet with a diameter of ten feet.

Malayan and oceanic regions are represented in the tropical flora of these territories, and in the ranges pine, fig and orange trees flourish. On the higher steppes there

are varieties of eucalyptus, while a very wide range of fibre plants are indigeneous.

The cost of labour and transportation renders work such as the clearing and fencing of land expensive, and therefore it is essential that settlers should possess either a fair amount of capital, or should be assured of substantial financial assistance from the Government. The cost roughly exceeds that in the other States of the Commonwealth by about forty or fifty per cent.

Even if there is a percentage of inferior land in these territories, and some even regarded as valueless for productive purposes, it will be seen that of the half million square miles there must be an immense amount well worthy of serious attention.

The work certainly demands solid men, not easily daunted by difficulties, who are content to live for a time in comparatively comfortless surroundings, but who can nevertheless look forward under the liberal land conditions of these territories to becoming lessees themselves and establishing a home which they can call their own.

Mr. Alfred Searcy, who spent something like seventeen years in the Northern Territory, and was later a prominent official in the House of Assembly in South Australia, in his book, *By Flood and Field*, which deals entirely with life and experiences there, says : " To the young man with courage and industry, I would say, ' Go to the Northern Territory. I know of no better place for such as you.' "

Chapter 15

MELBOURNE AND THE VICTORIAN SCENE

I AM in Melbourne, which is decidedly the best laid-out city in Australia. It differs from Sydney in two important respects, it is less like an American town and has a climate which is considered to be far more healthy and invigorating than any of the other state capitals, with the possible exception of Hobart, Tasmania. All this I welcomed after the torrid heat of the interior of the continent; but the weather is more changeable, and the coast of Victoria is subject to brief cold spells when the wind changes to the south during the short winter. The long summer is often marked by periods of extreme dry heat and dust, when the wind blows from the interior.

What is so attractive about all the principal Australian cities is their proximity to the sea, in a land where the sea can be enjoyed in all its panoply of blue water and golden sunlight. Melbourne is certainly no exception to this rule. There is a breezy, bright and gay appearance about this city, which, because of its size—and it is the second largest city in Australia—one is liable to forget is no longer the capital of the Australian Commonwealth, but only of historic and interesting Victoria, the smallest but most highly developed state of the union.

Melbourne's million people spread themselves, with a delicious disregard of space and land values, over the two hundred and fifty square miles of "Greater Melbourne." The streets are arranged at right angles to each other, and many of them are imposing thoroughfares. How difficult it is to lose one's way, and how stupid it is to make this excuse when late for an appointment, will be apparent from the fact that every little

Melbourne girl and boy knows that five main streets run parallel and equidistant for one mile and a quarter, like gashes across the city's centre. These thoroughfares are intersected at regular intervals by four streets, each of which is exactly half a mile long. Within this oblong is central Melbourne—"and don't you forget it, sir, if you lose yourself another time. Jeest count your paces along one block and simple arithmetic tells you how far you are away from where you don't want to go, but you've got to."

This was how a taxi-driver gave me a lesson on Melbourne when I first entered the city. Then I learned the second lesson. "Face the sun and drive down the broadest avenue you can find and you can't miss St. Kilda—or, at least, the briny ocean!" After grasping the alphabet of Melbourne it soon becomes easy to form one and even two syllable words, like "Collins Street," a fine commercial "artery"—which should also remind you that here live the principal medical specialists. You can, too, obtain money in this centre of national finance if you're lucky or know a bank where the cashier will greet you with a deferential smile. Then, you can turn quickly into Bourke Street, do your shopping; and this will be a pleasure in Melbourne if you are of the female persuasion; book your seat at one of the theatres, have tea, pass an hour in a cinema, and, in the cool of the late afternoon, saunter about in the gardens and parks on the banks of the Yarra River—and don't blame Melbourne for this, as it becomes quite a nice little stream, gay with boats and things further upstream. And so, by way of a broad, straight and majestic avenue, made hideous by the clanging tramcar bells, to bed in the invigorating seaside air, after listening to the band or walking on the jolly little pier of St. Kilda.

Yes, I can hear you say, "Why, I can do all this at home." That's because Melbourne is so English.

Along the shores of Hobson Bay, within easy distance of the capital by motor-car, rail or street tram, there are numerous seaside resorts with fine stretches of sandy beach, where swimming can be enjoyed during the

summer months. Portions of this coast resemble somewhat the promenades and pleasure cities along the Channel shore of England. St. Kilda, with its pier, sands, esplanade, hotels and gardens, is particularly English-like, and Sandringham, Mentone, Geelong, and other smaller places all help to remind the traveller that the Australians of today are of British extraction to the remarkable extent of ninety-five per cent. As a nation they are far more truly British than the population of London.

Among the sights of Melbourne, there is the Domain, which, little more than a hundred years ago, was a swamp, inhabited only by a few aborigines, with its Botanical Garden and the million-pound Shrine of Remembrance, which somewhat resembles an Aztec Temple, but is nevertheless fine and impressive; the magnificent University; the grounds of the Melbourne Cricket Club—the scene of tremendous enthusiasm during a Test Match—and, of course, the Melbourne Cup. All Australia ceases work while the race is being run, and millions of Britons all over the world hold their breath in case their heart-beats should interfere with long distance and short-wave listening-in.

Included within the area of Melbourne are the suburbs of Williamstown and Port Melbourne, where the ocean liners mostly land their passengers instead of proceeding up the river to the heart of the capital. Here, however, I must strike a more serious note. In Melbourne you can feel very cold in winter; and there are slums and tenements here which equal in drabness the East End of London or the Bowery of New York. If I forgot to mention the slums of Sydney it was because in a warm climate poverty seems less cruel and hideous. No one should go to Australia, as they have done in years gone by, expecting to find “the streets paved with gold”—and all the policemen’s backs turned!

The State of Victoria, which has an area of 87,884 square miles, is a little smaller than Great Britain, and has an approximate population of just over two million,

Opposite—Melbourne, in the heart of the stately old-time Capital of Australia.





Above : GOVERNMENT HOUSE, MELBOURNE

**Below : THE OLD FEDERAL (NOW STATE) PARLIAMENT HOUSE, MELBOURNE.
The new Parliament Buildings are at the recently constructed Federal Capital of
Canberra**







Above : MELBOURNE FROM THE BANKS OF YARRA RIVER

Below : A LAKE IN GIPPSLAND, VICTORIA

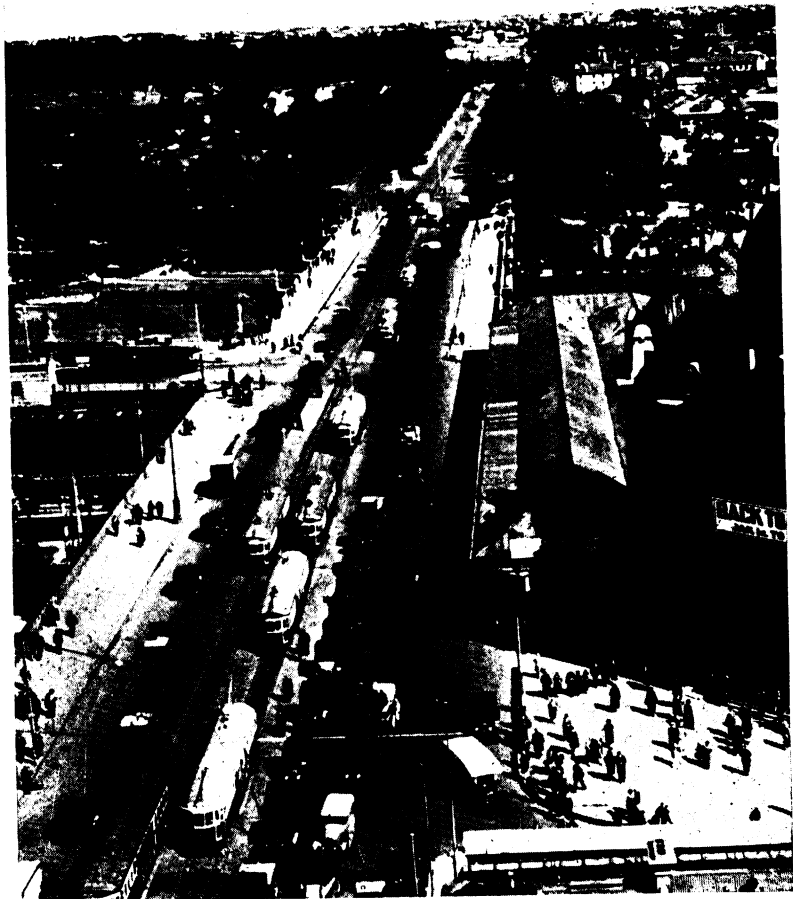




1. BENDIGO (VICTORIA) LOOKING SOUTH
2. STURT STREET, BALLARAT, VICTORIA
3. RIVER YARRA, MELBOURNE



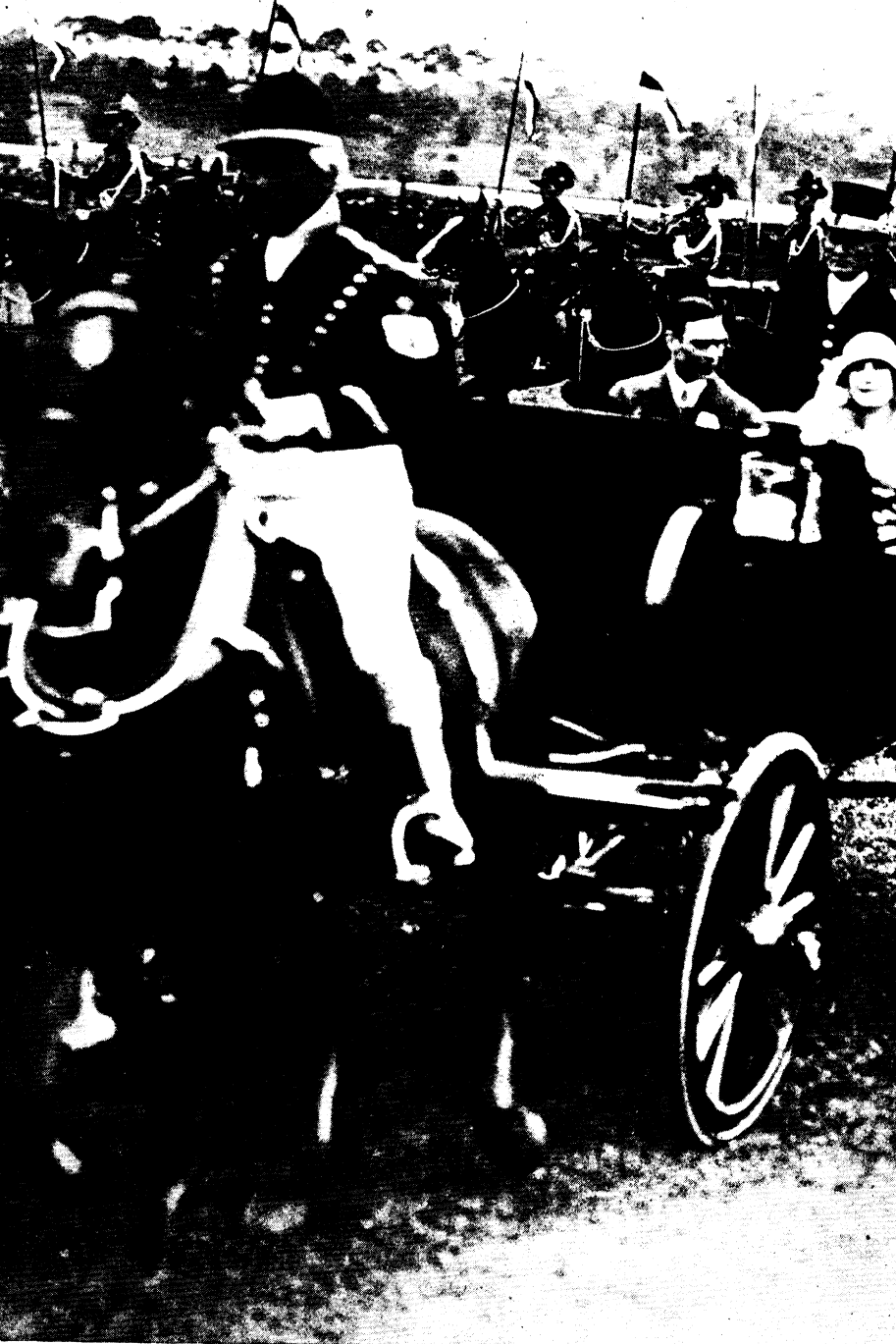
1. THE PUBLIC LIBRARY, MELBOURNE, VICTORIA
2. A SKATING PARTY ON LAKE CATANI, MT. BUFFALO, VICTORIA
3. MELBOURNE CRICKET GROUND



Above PRINCES BRIDGE, MELBOURNE

Below "ON THE SLOPES OF MT. KOSCIUSKO, 7,300 FEET."





THEIR MAJESTIES THE KING AND QUEEN AT FLEMINGTON RACE COURSE,
MELBOURNE, AUSTRALIA, 1927

of which over one half reside in Melbourne and district ; the remainder are scattered about the whole fertile area, or collected in large inland towns, like Bendigo, Geelong and Ballarat. Nevertheless, in Victoria, as in every State in Australia, there are vast plains on which every man has at least three square miles to himself, and some, like the Ninety-Mile Desert—which is not a desert as such is generally understood, but is a broad plain covered with mallee scrub and dwarf gums—where the population averages only about one person to every ten square miles.

Victoria is the most fertile State in Australia. It produces more wheat than is required for home consumption, and a considerable amount is exported. Tobacco, fruit and hops are grown in large quantities, as well as barley, oats and hay. The dairy industry is a growing and highly profitable one, and viticulture flourishes ; but the staple products are gold and wool. The latter is the chief export from every State in Australia, and in Victoria all the north and north-west territory is occupied by rich pasture lands. The scourge of these plains are rabbits and rats, which breed so rapidly that it is difficult to prevent them overrunning the country and clearing the herbage necessary for grazing. In many cases the government has offered a bounty for their wholesale destruction.

Victoria is divided into two distinct portions by the mountain ranges which traverse the country in several directions. The western half is composed of plains with a few low hills, and the eastern portion, known as " Gippsland," is mountainous and contains many forests which yield an abundance of timber. Nowhere do the mountains attain a higher altitude than six thousand feet. The lakes and little resorts hereabouts, add quality to the attractiveness of this show place of Victoria .

Bendigo in the days of the gold rush was composed of mining camps, piles of tailings, and a large number of " juice-shanties," or spirit saloons. The diggings extended for nearly fifty miles, but as the extremities of the field were worked out the miners concentrated on the

town which had rapidly sprung up, and in its transformed condition now makes one of the chief towns of Victoria. There is little in the modern streets and buildings to denote that this was once the scene of a typical mining camp in the wilderness, but the surrounding country is still the richest gold region in the State and reefs are being actively worked. During quite recent years the output of gold has, however, suffered a severe decline and averages only £200,000 in annual value.

At Ballarat, which is on the western gold-field of Victoria, a modern metropolis has long since taken the place of the town of shanties and mining camps, although work on deep reefs is still being carried on. One of the largest nuggets found in this region was the "Welcome," unearthed in 1858, which weighed 2,217 ounces. Gold mining also forms an industry in the country surrounding the towns of Ararat, Stawell, Beechworth, Raywood, Rutherglen, Creswick, Maryborough, Avoca, Heathcote, Tarnagulla and Daylesford.

Victoria possesses more inland towns of importance than any of the other States. Cities like Bendigo, Ballarat and Geelong, with over thirty thousand inhabitants, give a stability to the whole State, and greatly stimulate the manufacturing industry, which in turn promotes agriculture.

The coal mined in the Outrim district is largely used, not only by the numerous factories in this State, but also by coasting steamers, many of which have their headquarters in Melbourne.

This State is crossed, midway from east to west, by a range of mountains and hills, which form a boundary between two distinct climatic zones, the climate of the northern zone being warm and dry, while that of the southern zone, subject to the influence of the surrounding southern seas, is cooler, and blessed with a more regular and abundant rainfall. On the north-western plains the winter is mild and sunny, and even the excessive heat of January and February causes no inconvenience to the local population, owing to the small

percentage of relative humidity in the atmosphere, which is characteristic of the climate of these localities.

The south-western district of Victoria is open, and, to a great extent, unsheltered by land elevations from the influence of both the ocean and the interior of the continent. The Dividing Range in its trend from east to west gradually vanishes, and there are relatively small areas of hilly country. The Otway Forest is a region of heavy rains ; some of the wettest stations in Victoria are found in this locality. Its climate is essentially maritime and moist, with a relatively cool summer, a wet winter, and a very small range of temperatures. The other coastal district possess the same maritime climate, but with less rainfall.

The climate of the Midlands is dry, with a moderate and very regular rainfall evenly distributed throughout the seasons, abundant sunshine and moderate temperature. The upper lands have a cooler climate, dry and bracing, and a greater rainfall than the lower lands.

The total area of Victoria in acres is 56,245,760, out of which there still remain unoccupied, including large areas of waste land, over 15,000,000 acres.

There are in this State millions of sheep and cattle. The average annual export of wool amounts to somewhere about 125,500,000 pounds. The area under wheat is approximately three million acres ; cereals a million, and hay one and a quarter million acres.

The summer was drawing to a close when I arrived at the Chalêt Hotel on Mount Buffalo, in the Australian Alps. The wind had become perceptibly cooler during the journey by motor-car along a magnificent mountain road from the little town of Bright. Although an impressive panorama had been unfolded during the climb to this elevated point, it was nothing by comparison with Buffalo Gorge. A great rift in the granite cliffs widens rapidly from a few feet at its innermost end to a breadth of about five hundred yards at its mouth. On both sides the walls of rock rise up for over one thousand feet. Into this tree-filled abyss the waters of Crystal Brook plunge

from the giddy heights above. The falls sway in the breeze, and it appears to me that the drop is far greater and more impressive than that of the Bridal Veil in Norway, or its counterpart in Milford Sound, New Zealand.

During midwinter on the plateau above, and throughout the whole Alpine region, from Mount Buffalo, 4,500 feet, to Mount Kosciusko, across the New South Wales border, and the greatest of Australia's mountains, 7,328 feet, there are deep snows, and winter sports have become quite popular. On one occasion I climbed up to the artificial lake of about sixty acres which has been ingeniously formed on the Buffalo plateau. This has been stocked with trout, and some fine fish can be taken from it during the season. In winter it is frozen over and used for skating. "Geologists estimate that the plateau at one period reached a height of about twelve thousand feet, but that it has weathered down in the passage of time, and what we see now is really the ruins of a mountain. Curious evidence of the action of the elements is to be found in the fantastic boulders with which the summit of the plateau is strewn." One of these is called "The Leviathan Rock," and is estimated to contain thirty thousand tons of solid granite.

At the change of seasons this lofty eminence, from which the most wonderful sunset views are obtained, is not at its best, however, and I hurried down to lower altitudes and a more genial climate. The Gippsland Lakes are best approached from the town of Sale. They are divided from the ocean by a narrow rampart of sand-hills, and when the population of Australia increases appreciably they will become the most popular tourist region in the whole continent. The views afforded from the decks of the little steamers which ply on these lakes and rivers combine to form the most entrancing pictures of water and forest. There are several small fishing, bathing, yachting, shooting and golfing resorts hereabouts.

On the way down from the mountains to the sea there is the Bushranger's country, or, as the people of the

towns of Benalla and Glenrowan still call it—not without a note of pride in their voices—"Kelly's Country." In case you have forgotten Mr. Boldrewood, and his *Robbery Under Arms*, and other stories of the Australian bushrangers which delighted the hearts of "Victorian" youth, the particular Mr. Ned Kelly whose country you enter around these two towns was a bushranger of unusual daring and enterprise. All sorts of stories will be told about him in his own town if you stay there and engage the sympathies of one or more of the older or younger inhabitants. He has become a sort of Australian "Robin Hood."

If Ned Kelly had not been hung in 1880 for shooting at the police, when he was at the tender age of twenty-six, he *might* have been alive to tell this tale himself. Ned was a bushranger who held up people, outlying banks and stations, and robbed them in the good old-fashioned way. He neither molested women, cut the throats of children, nor tortured his victims in the modern civilised manner—so the old folks of Glenrowan tell. The three stories which impressed me most concerning this Irish brave—for brave he certainly was; and one, at least, of these must also have impressed the judge whose duty it was to sentence him to death—concerned, firstly, the unorthodox method of the police who arrested Ned's mother for aiding and abetting her son in crime—"though, for shure, the poore sowl was as innocent as the good Saint Patrick"—and they sent her to hard labour for three years.

Secondly, young Ned made himself a suit of armour out of ploughshares, and even covered his face with a visor. Thus garbed and armed with a revolver he advanced against fifty police—all equally as well armed, though not armoured—and tried to join his friends in an hotel in Glenrowan. Wounded but unsubdued Ned escaped with his gang. Then an informer, Aaron Sherrit, appeared on the scene and threatened to shoot one of Ned's gangster friends, Joe Byrne. While four police were guarding the terrified spy, Joe walked into the house and shot him dead.

This act in the little drama of the 'eighties of last century occurred in front of an hotel in Glenrowan, where all the people of this little township were gathered with Ned and his merry men—for they danced and they sang with those whom they robbed, and Kelly often gave lectures on behaviour to the police themselves! Police reinforcements arrived by train and fifty armed constables poured a merciless fire into the hotel, regardless of the presence there of women and children. Ned advanced in armour to the help of his beseiged friends. The fire of the fifty police found the weak spots in his armour and he was wounded and arrested. Taken to Melbourne because it was known that no local jury would convict him, Ned was tried and hanged.

Something occurred at this trial which has never been satisfactorily explained. It was the same judge who had sentenced Mrs. Kelly to hard labour, and after he had passed the death sentence on Ned, the condemned man looked him straight in the face and said : " I shall meet you soon after! "

The judge died suddenly a week after the execution.

Chapter 16

TASMANIA, THE VERDANT ISLE

THERE is something peculiarly attractive about Hobart, the chief seaport and capital of Tasmania. It is not its size, because it is the smallest of the Australian state capitals, but for surrounding scenery it has no equal in the Southern Continent. I reached it by sea from Melbourne, and must confess that Storm Bay is not misnamed. After a wild night we entered the sunny, peaceful Derwent River, and for twelve miles cruised between green hills and dales until Hobart, in the shadow of Mount Wellington, came into the rural scene like a fairy city. Although thoroughly up-to-date in all its amenities, the Tasmanian capital is pleasantly devoid of the noise, dust and bustle of Sydney and Melbourne. It has the atmosphere of a pleasure resort, and that is what it is fast becoming, in spite of its busy maritime activities and the trade engendered by its surrounding orchards.

There is nothing medieval about Hobart, which, with its suburbs, has a population of over seventy thousand. One of my first excursions was to the summit of Mount Wellington, from which a most wonderful panorama of rivers, houses, islands and leagues of tree-clad country is obtained. It was, however, the ferns, rocks and waterfalls seen during the ascent which impressed me quite as much as the stupendous view from the peak.

In a twelve miles motor run from the city one reaches an altitude of 4,166 feet. The road rises steeply directly Hobart is left, and throughout the remainder of the climb the vast panoramas unfolded are amazing in their variation. On a clear day one can see Maria Island,

some fifty miles distant from the east coast of Tasmania and, in the opposite direction, Lake St. Clair, nearly a hundred miles to the westward of Mount Wellington. This immense lake is one of the sources of Tasmania's hydro-electric power supply, about which—with the growing manufacturing industry of this island State—more will be said in the appropriate place. In winter time Mount Wellington is often capped with snow.

"Hobart is a city rich in Pacific traditions," says a local publication. "Its streets still dimly echo the dread sound of convict chains, sailormens' chanties and whaler's caulking malets. Sea rovers have roistered in its taverns. Men of many nations have quarrelled and fought in the streets of this now beautiful and peaceful city. For the curious Hobart is full of strange and stirring tales of the sea."

The harbour is three miles wide and the largest ships can now sail right up to Ocean Pier, in the centre of the city. Hobart's *average* temperatures range from 47 degrees F. in winter to 62 degrees F. in summer. The favourite bathing beaches are close to the little suburban town of Bellerive.

Launceston, the northern city of the State, is situated on the River Tamar. It has a population of about thirty-six thousand. Owing to its proximity to the mainland of Australia, it is one of the principal entrance ports for people visiting Tasmania from the southern States of the Continent. Like the capital city, Launceston has a motor road which climbs to the summit of the principal mountain in the district. During a run of twenty-six miles from the city I was taken to within fifty yards of the summit of Mount Barrow, 4,300 feet, from which there are magnificent views far and wide. The River Tamar is a truly noble stream, that, in its forty miles journey to the Bass Strait, traverses a lovely valley. Its broad waters are ideal for yachting and motor-boating.

Before coming to this part of the continent, I had read Marcus Clark's famous novel, *For the Term of his Natural Life*. Unfortunately, even to-day, there are

Opposite—Elizabeth Street, Hobart, Capital of Tasmania.

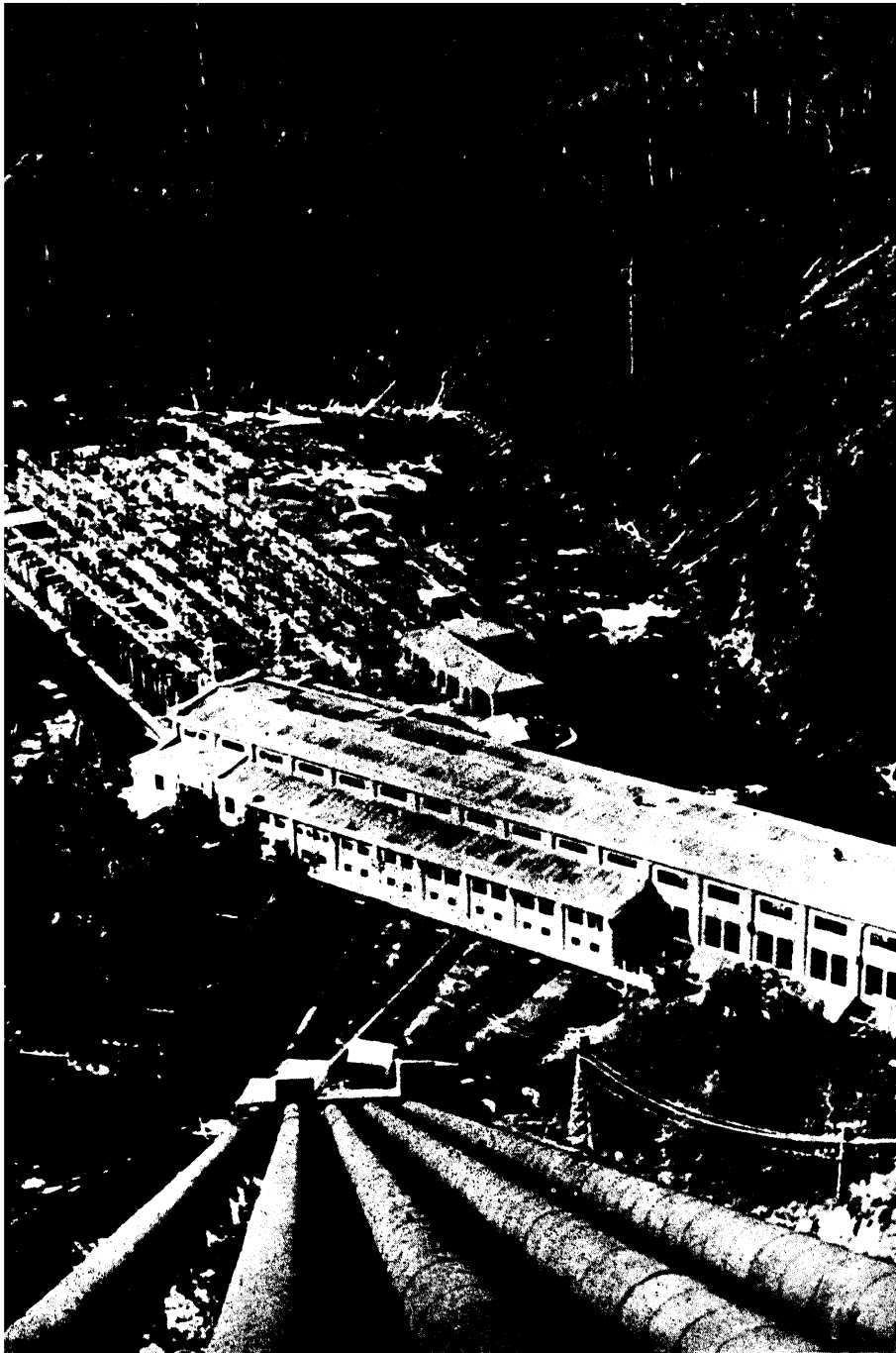




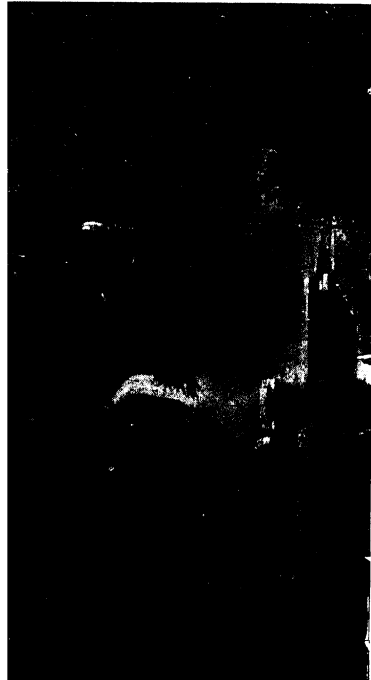
Above : HOBART, CAPITAL OF TASMANIA. At the close of the nineteenth century

Below : LAUNCESTON, TASMANIA





Tarraleah, the great hydro-electric power station, Tasmania. Many famous industrial enterprises in Great Britain have established works in Tasmania and draw their power from this service.



Above : A COUNTRY ROAD, TASMANIA



Above : CENTRE OF SHOPPING DISTRICT, HOBART, TASMANIA

Below : FRANKLIN SQUARE AND STATUE, HOBART, TASMANIA



many Australians who regard this unpleasant chapter of English history as casting a reflection on the present population of the Commonwealth. Let such sensitive individuals take heart from the fact that not only have there been many more criminals in the British Isles, since transportation ceased, than were ever sent out to Australia, and that there are few Britons whose ancestors did not include either pirates, slavers, privateers, smugglers, buccaneers, highwaymen or the like. Moreover, the bulk of the Australian population to-day are the sons and daughters of pioneer settlers, the finest and most verile of British stock.

It was, in fact, with thoughts like these that I looked at the few remaining ruins of Port Arthur and at Eaglehawk Neck, the narrow strip of land which alone prevents the Tasman peninsula from being an island. In the days of "the system," passage across this narrow isthmus, which is only a few hundred yards wide, was barred by mastiffs, which were chained, so that the alarm would be given if prisoners attempted to escape. The sea on each side was guarded by sharks. Incredible as it may well sound to-day, these loathesome creatures were encouraged into the shore waters by "judicious feeding"; it is said, with the bodies of dead prisoners. When it is remembered that "transportation" to Van Diemen's Land was the common sentence for stealing even a sheep, or for what would now be termed a young offender, the iniquitous nature of the system will be apparent. In 1853 the name of this country which Nature has made so beautiful was changed to Tasmania.

On the north side of Eaglehawk Neck is the peculiar Tessellated Pavement, which is formed of large slabs of clay, suggesting a mosaic work wrought by Nature for the purpose of ornamentation. Then there is the blow-hole, a tunnel worn by the waves, through which, at certain states of the tide, the big waves of the Southern Ocean surge in angry turmoil, causing a noise like thunder, which is echoed from the walls and roof. About a mile away stands Tasman's Arch, about two hundred feet in length and forty feet in width. Two parallel walls

of rock support the arch, which is crowned with trees. The view from inside this immense and lofty sea-cavern is most impressive.

When invited to visit Interlaken and the lakes and mountains on the central plateau of this island, some two or three thousand feet above sea-level, I thought of another place of this name in far-off Switzerland, and the lakeland of Tasmania is not one whit less attractive than that of the playground of Europe. I reached these scenes by train and motor-coach along mountain roads made gay by the profusion of scarlet, purple and white berries. Lake Sorrell, which covers twelve thousand acres, is dotted with picturesque little islands. On one of its many beaches, called Desmond Bay, I saw hundreds of cornelian, quartz and agate pebbles. The Great Lake is a magnificent sheet of water, 2,880 feet above sea-level, surrounded by still more lofty hills and broken by cedar-clad islands.

Of all that I saw during some hundreds of miles of motoring from one delightful little resthouse to another, there can be no doubt that Lake St. Clare is the most impressive, with the peculiar shaped mountains Ida and Olympus at its head. It is away from the beaten track. A silence broods over its deep waters. Eagles hover above the lofty basaltic pinnacles of the surrounding heights, and its shores are veiled in firs and peculiar little stunted palms. It was here that I caught a glimpse of the duck-billed platypus peculiar to Australia and Tasmania. It is the quiet rusticity of this island, its smallness and its fresh green beauty, which appeal to the jaded traveller, whose eyes have grown weary of the flickering heat, the lofty and eternally blue skies and the vastness of most Australian scenes.

Tasmania is situated across the Bass Strait about one hundred miles south from the coast of Victoria. This island state of the Commonwealth has an area of 26,215 square miles and a population of over two hundred and fifty thousand. It is about the size of Ireland. Of all the Australian states Tasmania is the most like Great Britain

and offers exceptional advantages to the settler with reasonable capital who is not only content and able to live on and by very fertile land, but is seeking a warm though not a hot or enervating climate. The question of whether he will feel isolated in Tasmania can only be satisfactorily answered by asking himself if his desire to commence a new life is due simply to the *wanderlust*, or to a genuine *intention* to make a living on, by and from the soil? Then he can supplement this self-interrogation by the simple query—"Am I content to remain for several years within fifty or a hundred miles radius of my home, visiting a large city only occasionally?" It is *not* sufficient to answer these questions by the unenterprising assertion, "What else can I do?" Self-analysis is essential before emigration. So often after returning from one part of the world or another have I been asked for advice, that I give here what, in many cases, has led to a wise decision.

Tasmania is divided into eighteen counties, many of which are named after those in the "Old Country." In the north lie Devon, Dorset and Cornwall, which are all fine agricultural counties; and here also we find the towns of Launceston, Devonport and Torquay, with dashes of Scottish like Ben Lomond and Ben Nevis. Ireland is represented by St. Patrick's Head and River; and Tasmanian residents enjoy a trip on the Tamar as much as the inhabitants of Plymouth. Although there is a village of Exeter there is no cathedral with massive carved front, but cider is a speciality, and cream is by no means an unknown quantity. Devon is thickly covered with forest, but there are more prosperous farms in the clearings than there are in any other county of the island. Cattle-breeding also forms an important industry, and fruit growing on the lower Mersey is, judging from its rapid growth, a very profitable undertaking. Around Beaconsfield, near Port Dalrymple, gold mining is largely carried on. The general aspect of this country, and also of Cornwall and Dorset, is decidedly picturesque; and in Wellington, which forms the north-western corner of Tasmania, there are magnificent forests of

eucalyptus, myrtle and musk, and the ground is hidden beneath a profusion of wild flowers, sassafras and fern. Around Circular Head cattle and sheep are reared in considerable numbers ; wheat, oats and potatoes are grown, and creameries are rapidly springing up ; but the climate of this county, generally, is wet and windy, which causes it to be less suitable for agriculture than those on the east coast.

Dorset, in the extreme north-east, is well covered with forests, which, however, must be cleared and " burnt off " before more land for cultivation is available ; but near Scottsdale, Ringarooma and Georgetown, there are some magnificent farms ; and dairying is a paying industry. The chief wealth of this county lies in the gold-bearing stratum around Lefroy and " Nine Mile Spring," and the tin mines near Derby and on the Thomas Plain.

The most important county in the north of the island is Cornwall, which possesses the city of Launceston. Situated on the broad River Tamar, which runs through Devon to Port Dalrymple, this town has direct steamship communication with Melbourne and Sydney, and is linked by railway with Hobart, the capital of Tasmania, and the chief port on the island. Cornwall, however, does not rely solely on the industries, manufacturing and otherwise, of its principal city, for it possesses the rich gold-fields and coal-mines around the bright little town of Fingal, as well as the " Black Boy " and " Tower Hill " gold-fields. Agriculture forms an important industry of the districts around Launceston and Avoca, but the development of the cultivable area is slow, and pastoral farming is here only a minor industry.

Thick myrtle and brake forests occupy the principal portion of what is left by the rugged mountain ranges of the county of Russell, which, in common with the whole west coast, has a very wet climate. It is no exaggeration to say that rain falls on three hundred days out of the three hundred and sixty-five in the year. The mining industry is, however, important. Near Mount Bischoff are situated some famous tin mines, where the machinery is entirely operated by hydraulic power, and the ore is

worked from the outcroppings in the cliff side. The rivers of this county yield a considerable quantity of gold and silver-lead; but the climate prevents the development of agricultural and pastoral industries.

The "Lake District" of Tasmania lies in the counties of Lincoln and Westmorland, which are certainly appropriately named; although the scenery around the shores of Lake St. Clair far surpasses for wild beauty the banks of Lake Windermere; and the "Great Lake," with its wild mountainous surroundings, more closely resembles Loch Lomond than Ullswater; but, unfortunately, the climate of the Tasmanian Lakes, except during certain months, is even worse than November in the English Lake District.

This region, which is situated in the heart of the island, is but little known. The mountain gorges answer only to the ring of the miner's pick or the woodman's axe, and the broad sheets of water, one of which, the "Great Lake," is over thirteen miles long and eight miles broad, are silent and undisturbed save for the birds and breezes from the mountain sides. The banks are completely hidden by thick native grass and trees, and a million leaves are mirrored on the placid waters, which hide their depth in innumerable devices of weeds and water flowers. High on each side rise the mountains, dappled almost to their summits with giant ferns and trees.

Lincoln, which surrounds the northernmost lakes, is rich in gold, silver and copper, and bids fair to become the most important mining county in Tasmania. The Middlesex gold-fields are being actively worked, silver is found on the banks of the Dove River, and copper in large quantities near Baron Bluff. Cradle Mountain, five thousand feet high, and the most lofty peak in Tasmania, rears its mighty crest above the county of Lincoln.

The summer climate and soil of the northern portion of Westmorland lend themselves more favourably towards cattle-breeding, sheep-raising, and agriculture, than do those of the county of Lincoln, although the

rainfall is very heavy in both counties. Notwithstanding this fact wheat is more extensively grown in the northern portion of this county than it is in any other part of the island. The country around the lakes in South Westmorland is, however, very mountainous and but little exploited.

The counties of Montagu, Franklin, Montgomery and Arthur, on the west coast are principally given over to mining. They are traversed in all directions by mountain ranges, and have a wet, stormy climate. The copper mines of Mount Lyell, situated a few miles inland from Macquarie Harbour, to which they are connected by railway, have sprung into fame during recent years. The production of copper is considerable, especially in the vicinity of Swansea, a growing coast town, facing Oyster Bay. Coal is also found in extensive seams in this county.

Pembroke and the Tasman Peninsula enjoy a mild and somewhat humid climate well suited to the horticultural industry. All kinds of fruit, especially apples and pears, are exported in large quantities from this region. Almost the same is the county of Kent, which, however, possesses the finest orchards in Tasmania, and is thickly wooded with eucalyptus and myrtle. There are many excellent agricultural lands, and wheat and cereals are largely exported.

Much of the arable land in Buckingham has now been brought under cultivation, and orchards and hop gardens are dotted all over this county. The chief agricultural centres are New Norfolk, Brighton, Kingston and Glenorchy.

In Tasmania there are many small coast ports and over thirty towns of more than five hundred inhabitants. The fauna includes the Tasmanian Devil, the duck-billed platypus and the kangaroo, as well as the opossum, wombat and wallaby, which are valued for their skins.

Around the Tasmanian coast there are over fifty small islands, the most important of which are King Island and the Hunters group in the Bass Straits, and Flinders and the Kent group off the north-east coast. Although

extensive fisheries are carried on along the coasts of these islands they have at present but little commercial value.

The Dividing Range, which continues its course from the continent uninterrupted by the Bass Straits, skirts the east coast of Tasmania and completely alters the climate, reversing the Australian characteristic by causing the country west of the range to suffer from a very wet climate, and the eastern coast-line to enjoy a warm and salubrious one with a fair rainfall. Tasmania on the whole possess a remarkably good climate, which causes it to be generally preferred to many parts of the Australian mainland. The winters are much warmer than in England, and snow seldom falls, or remains on the ground more than a few hours, except on high levels. The summers, though rather warmer than in England, are much less oppressive than those in Australia, and the air is dry and seldom sultry. At Hobart the mean maximum temperature for a month is 64 degrees, and the mean minimum 46 degrees; the extremes range from about 30 degrees to 100 degrees. At Launceston the mean maximum is about 65 degrees, and the mean minimum 44 degrees. The rainfall is very variable; that at Hobart is from 18 to 30 inches a year, each month having some rain. Launceston and the north coast have more rain. In the interior there are on an average about 21 inches at Oatlands, and 18 inches at Hamilton. On the east coast Swansea has 27 inches, and Southport on the south coast has about 40 inches. The west and south-west coasts are always wet, Mount Bischoff having about 80 inches a year, Zeehan 92 and Mount Lyell 117. Many diseases, which in England are often serious, are in this climate comparatively slight, and the rate of infant mortality is particularly low. So generally recognised in Australia is the pleasantness of the Tasmanian climate, that a great number of persons go there every summer from Melbourne and Sydney to escape the heat and dust of the continent. The seasons are nearly the opposite to what they are in England, the summer commencing in December.

Chapter 17

LIVING AND WORKING IN AUSTRALIA

BECAUSE a man likes an open air life, with much of his spare time spent in the sunshine, it does not mean that he must necessarily be a farmer, a boundary rider of the sheep lands, a cowboy of the outback, or a shearer among ten thousand sheep ; and, in consequence, must think of Australia only in terms of wool bales, wattle fences or wheat fields, in the isolation of a " never never " land.

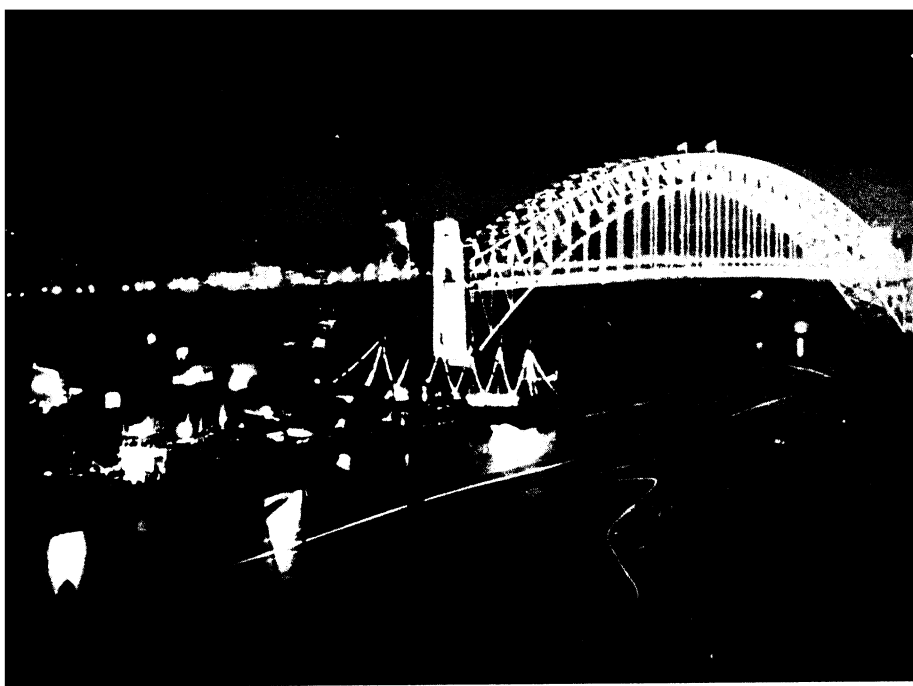
After seeing much of this Continent ; which it should always be remembered is about the size of Europe, west of the Ural Mountains, and possesses almost the same diversities, except of people and language ; it may come as a shock to many to learn that in the opinion of well-informed Australians there appears to be every likelihood that migrants from Britain will find as many openings for their skill or their labour in factory, shop and yard as on the farm or station.

That there are many reasons for this goes without saying. For example, the work of a carpenter, engineer, builder or chemist, is largely systematised, and is similar the world over. Not so, however, the more individualistic and climate-controlled work of the farmhand, the shepherd whose flocks have a hundred square miles of pasture, or the shearer who forms one of a highly expert travelling company who may cover four or six hundred miles going from one station to another across the dried-up-looking, shimmering, dusty and sun-drenched plains during a single season.

All this is bound up, however, in that glib phrase, " national economy," which covers a subject of such extraordinary complexity that two, at least, of the most

Opposite—Above : Sydney Harbour and Bridge by night. The light streaks on the water are made by fast-moving ferry boats. One of the largest cities in the world beneath the starry Australian sky.

Below : Homestead on Knockalong Sheep Station in the South Monaro district of New South Wales, Australia. It is a cool, comfortable 12-roomed house, 46 miles from the nearest railhead. It has hot and cold running water, electric light and sewage.





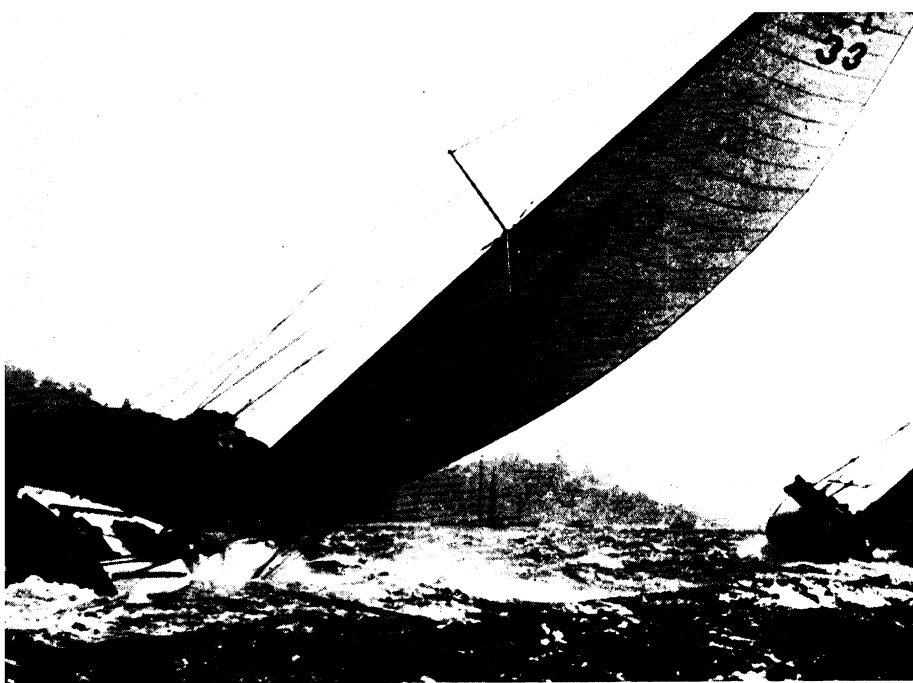
Top : BUSH CHILDREN OFF TO SCHOOL
Left : GOAT JUMPING
Right : A SURF RIDING ENTHUSIAST



Above : STUDENTS IN THE GROUNDS OF PERTH UNIVERSITY, W.A.

Below : ORMONDE COLLEGE, UNIVERSITY OF MELBOURNE, VICTORIA





Above : YACHTING, SYDNEY

Below : A RESIDENTIAL AND ADMINISTRATIVE QUARTER OF THE CITY
OF MELBOURNE

expert and famous of British financial and economic advisers have frankly confessed to me that really little is definitely known concerning fundamental and long range cause and effect of much that is discussed as though it were governed by immutable and known laws.

I shall not attempt, therefore, anything that might purport to be an analysis of Australian economics, but rather to deal piece-meal with those conditions and factors of life and work in the Commonwealth which may seem to be of use or interest.

An economic and psychological transformation has brought Australia to a special place in the forefront of the international arena, not only as a political, but as an industrial power. In a summary of the post-war position the Australian economist, W. P. Goodwin, gives the following well-reasoned facts, to serve here as a basis for the more down-to-earth gleanings to follow.

"Notwithstanding the staggering cost of a grim struggle for national survival, systematic economic controls, sound finance, full employment, and unprecedented production have contributed to the maintenance of her economic balance and high standard of living to an extent that no other country can claim to have bettered. To-day, with an enterprising population, considerable resources, expanding commerce, a strategic rôle of peculiar importance and fewer and less aggravated problems than other lands, she has reason to look forward to a future of unusual promise.

"In 1942, Australia found herself practically cut off and in imminent danger of invasion by the Japanese. Her largely unarmed population of some 7,400,000 was faced with the defence of a continent 2,974,581 square miles in area, including the island of Tasmania, as well as the 90,540 square miles of the territory of Papua and the 93,000 square miles of the Mandated Territory of New Guinea. Not only did she succeed in saving herself and reconquering New Guinea and other territories in the South-West Pacific, but she converted herself into the great base from which began the Allied campaign that ended in Japan's downfall, and into the arsenal of

the Pacific which supplied practically all the food and a substantial part of the munitions used by her own, British and American forces in the Pacific war. Incidentally, she was also the source of supply for the French Pacific colonies, provided £A.24,000,000 for U.N.R.R.A. (to which Australia was the fourth largest contributor) and made a gift of £A.25,000,000 to Great Britain, while supplying vast quantities of food.

"Although spared the devastation of war, Australia, like all active belligerents, paid a heavy price—95,923 casualties, and £A.2,111,000,000, or £A.287 gs. 2d. a head of the population, up to the end of hostilities. Of this huge sum, 34 per cent was paid from national revenue, two-thirds of the remaining 66 per cent were met by voluntary loans at a maximum rate of interest of three and a half per cent a year, while the rest was met by Treasury credits."

The bulk of the population of Australia is *not* on the land, whence is derived the major part of the country's oversea income, but is comprised of city dwellers concerned with commerce and manufacturing. During the war Australia learnt to make many products previously considered impracticable. This development of secondary industries was not just a war phenomenon, but was a feature of the inter-war period, fostered by a protective policy. The general purpose of the Australian Customs Tariff is to ensure a substantial proportion of the local market to Australian manufacturers for goods produced in the country in any considerable quantity. It provides for preferential treatment for products from the United Kingdom or other British countries with which Australia has a preferential tariff agreement, and a minimum general tariff applicable to goods from most other countries, except where required as capital equipment for Australian industries, to which low duties or free admission apply. However, a restricted system of import licensing is in operation, in conjunction with measures of exchange control, particularly with respect to trade with dollar countries and the pegging of the Australian £1 at 80 per cent of the £1 sterling. Australia is unlikely to vary

easily her tariff rates, except in cases where concessions may be made in exchange for other offered advantages.

The nation's economy, then, is essentially sound, but it should not be understood to be unlimited. Although possessing great natural resources, nearly two-thirds of the continent suffers from aridity; and uncertainties of rainfall make much of the remaining third subject from time to time to disastrous droughts. Moreover, the soil in large areas suffers from mineral shortages. These factors restrict the development, particularly as the hydro-electrical potential is relatively small.

On the other hand, some unexploited uranium deposits and substantial quantities of thorium exist, and in these days of atomic energy one would hesitate to forecast future possibilities. At present, power production is principally from coal, of which most of the States contain substantial deposits, particularly New South Wales, the main producer. This industry, like its counterparts in other lands, is undergoing difficulties, not the least of which has been its inability to keep pace with the demands of the rapid expansion of industry. Steps have recently been taken to reorganise coal mining, but it is too soon to assess their effectiveness. The country's chief natural shortages are oil, cotton, rubber, tea and soft timbers. She also lacks shipping. A wide search for oil, traces of which have been found in several areas, and a moderate shipbuilding programme are being carried out.

Any survey of the Australian economy must take account of the fact that the war brought home to its people the changed strategical significance of their land, and a realisation of her growing status in world affairs, as well as the changed political circumstances of her nearest neighbours, the millions of the Far East, South-East Asia and India. There has been a twofold effect. On the one hand, there is ready acceptance of the decision of the London Conference of Dominion Prime Ministers to co-operate in British Commonwealth defence, and recognition that Australia will make a larger contribution towards British Commonwealth

security—one consequence has been the construction of a £A.3,000,000 rocket-testing range in Central Australia. On the other hand, there is enthusiastic support for the United Nations, the final form of the Charter of which Australia influenced so strongly.

An agreement was reached in 1946 whereby the British Government grants free passages to suitable ex-service men and women, and, in conjunction with the Australian Government, provides assisted passages to other approved British people. The estimated number which can be absorbed has been placed at seventy thousand each year. This number, if added to the natural increase, would give to the Commonwealth an immediate rise in the population of over 150,000 a year.

Many of Australia's industrial concerns which were in their infancy before the Second World War have now been firmly established. Notable among these are the processing and dehydration of foodstuffs, shipbuilding, radio development, aircraft production, expansion of the textile industry, machine tools, drugs and chemicals, electrical equipment, and a host of other activities that will continue to expand. Thus migrants to Australia will find more opportunities in the industrial field than in agricultural or pastoral production.

The main primary industry of the continent is, of course, the growing of wool. Wheat, meat, dairy products, wine, and the growing of fruit and vegetables are other important primary industries. There are also timber-forests and fishing which could be developed considerably. All these avenues will provide work for some migrants. But those who have ideas of settling on the land in Australia should remember that conditions are radically different from those found in Europe. There is not the accustomed neat, compact countryside. It is a land of vast distances. In such a realm of open spaces, the boundary rider on a big sheep station may travel one hundred miles or so without meeting anyone, while the shearer, working down from shed to shed throughout the seasons, covers from Queensland to Victoria, a distance equal to travelling right across Europe.

Rural and industrial workers are well looked after. Wages, hours of work (in many industries, forty a week), accommodation and other conditions, are all safeguarded and controlled by Australian Court awards. Under these rules Australia offers workers some of the best wage and living conditions in the world to-day. Wages, including margins for skill, overtime, hours and rates are fixed by law and a comprehensive system of factory inspections ensure that the rights of the worker are fully protected. There is a basic wage fixed by the Arbitration Court at the highest minimum industry can afford to pay. This minimum rate is about £A.6 os. od. a week in New South Wales, but somewhat less in other states of the Commonwealth.

Although Australia, too, has its housing problems, rents are vigorously controlled and are generally much lower than in Great Britain. There is a wide variety of food available—fruit and vegetables are cheap all the year round.

Education is compulsory between the ages of six and fourteen years in most States. In New South Wales and Tasmania, however, the school leaving age has been raised to fifteen and sixteen years respectively. Free education is provided in State primary, secondary and technical schools, and in addition there are hundreds of private schools of a high standard. Scholarships are obtainable for Universities; also a system of subsidies for University and technical students, whose parents might otherwise be unable to give them University training.

All this leads to the question of who are readily admitted to Australia, and the official answer is, "a white British subject does not need to obtain special permission to enter the country, if he is in sound health, of good character, and in possession of a valid British passport. He must also satisfy the Customs authorities that he is not likely, if admitted, to become a charge upon the public funds. Non-British subjects can enter the country as tourists for six months, but this does not apply to refugees. In any case foreigners should apply for information on this subject.

The two most important points of the immigration

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The two most important points of the immigration

laws to be noted is that exchange control regulations do not prevent tourists from exporting surplus funds brought with them or forwarded to them during their stay in Australia. They may *not*, however, take out of the country sums in excess of the amounts brought in or received from abroad. Visitors to Australia are not required to pay income tax, provided they do not engage in remunerative business or occupation while in Australia, or visit the country in the capacity of representative of any overseas firm, or derive income from any source in Australia during their stay. Passengers' and settlers' furniture and household goods, which have been in the entrants possession *and use* for at least twelve months may be admitted free of duty to the value of £100 for each adult passenger, two children under eighteen being reckoned as one adult. Visitors by air must carry certificates, endorsed by a Government health officer, showing that they have been successfully vaccinated within the previous three years. Health examinations are made at all Australian ports.

To deal adequately here with subjects of such importance to the settler and traveller in Australia as taxation, costs of living, transportation by rail, air or sea, and other similar matters, would be wearisome to the general reader, and they have therefore been relegated to a series of appendices for convenience and to enable the descriptive account of the Continent, its people and their work and play to be continued without either too great or too frequent a digression.

There are many interesting and unique features in the systems of small house building in Australia. Firstly, the rather general impression outside the Commonwealth that private houses in Australia are built almost entirely of wood should be contradicted by an official statement that, "more than a third of the 1,750,000 homes and flats in the Commonwealth are built of brick, a big proportion in the suburbs and country towns being situated in tree-lined streets and roads. More than half the dwellings are occupied by owners, or people who are buying them by instalments."

While it is, of course, quite impossible here to give any indication of the prices of building land or house property of the superior type, it can be said that in recent years there has been a sharp rise due to the cessation of building during the war years. Although this temporary and largely artificial increase has not reached the absurd proportions that it has in Great Britain and elsewhere, it has resulted in an acute housing shortage, which is only slowly being rectified by private and State construction and the restriction of rents to either the 1939 level or to a "fair rent" as fixed by a Court of law. When exactly this condition will be changed in all the different states it is impossible to say. The deficiency of houses at the end of the war was estimated at 350,000 dwellings; and the peak pre-war rate of construction was about 40,000 houses a year. Up to 1946 replacement was at the rate of 24,000; but this has in subsequent years been stepped up to around 50,000 new houses a year.

Those who wish to own their homes can do so on very easy terms. The Commonwealth Bank extends long-term housing loans direct to individuals. The amount of credit that can be advanced is eighty-five per cent of the purchase price and the maximum loan is placed at £A.1,250, on the "lowest practicable rate of interest." The bank may also make loans to building societies of up to ninety-five per cent of the value of the estate.

In each of the Australian States there also exists a plan for the provision of homes for sale to persons of limited income. The conditions of sale have ranged from a deposit of ten per cent of the capital value down to a deposit of £5, or even, in very exceptional circumstances, to no deposit at all. Repayments of the balance of the purchase money are by weekly or monthly instalments extending over a prolonged period.

The two most interesting deviations from the usual, unimaginative, plans for the housing of a growing population are: (1) a combined Federal and State scheme for the provision of dwellings *for rental* by a scheme of intensive training in the technical schools followed by practical work on a building site, which makes possible

an addition to the building force of 16,000 men per annum ; and (2) the granting of rental rebates, for houses built under the above plan, according to the income of the tenant, and quite irrespective of an ordinary economic rent based on capital value.

This means that families earning the basic wage need not pay more than one-fifth of their income in rent. As the family rises or falls, the rebate will diminish or increase. This offers to modest income earners immunity from fluctuating prices. In the calculation of family income, child endowment and maternity allowances are excluded. The following examples, which assume the basic wage to be £5, the economic rent of the dwelling to be £1 5s. 6d. and the family income £5, £4 12s. 0d. and £5 6s. 0d., respectively, illustrate the operation of the rental rebate system.

<i>Basic Wage</i>	<i>Family Income</i>	<i>Economic Rent</i>	<i>Rent Rebate</i>	<i>Rent Payable</i>
£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
5 0 0	5 0 0	1 5 6	5 6	1 0 0
5 0 0	4 12 0	1 5 6	7 6	18 0
5 0 0	5 6 0	1 5 6	3 6	1 2 0

For the purpose of assessing a "living wage" the rent of a brick house of four rooms, with kitchen, bathroom and laundry (scullery) is reckoned at about twenty-five shillings a week and a wooden house, often a well-built bungalow, at approximately twenty-one shillings a week. Rents vary considerably for the same type of house in different districts, as, for instance, between different suburbs of the same city, and between city and country.

The average Australian lives comfortably, though not luxuriously. There is steam heat and air conditioning only in the most modern offices and a few homes.

Household refrigeration and hot-water services are still looked on as a luxury in most homes, but post-war plans for industry envisage more home refrigeration, and a wider range of kitchen facilities for the housewife. Electric appliances, from immersion heaters to kitchen stoves, are widely used. Electricity is the British standard of 415-240 volts, 50 cycles, three-phase supply in all

States except Western Australia, where the present 420-250, 40 cycles supply is to be changed to conform with the other States.

In most homes—even those with a large income—women do their own cooking and housework. Until World War II made it necessary for women to replace men in many jobs, so that the men could go to the war, comparatively few married women took full-time jobs.

There may well be readers who would like to know something definite about the acquisition of land in Australia. Leases of Crown lands are generally classified according to their situation, the suitability of the soil for particular purposes and the prevailing climatic conditions. The modes of tenure, therefore, as well as the amount of purchase money or rent, and the conditions as to improvements and residence, vary so considerably that it is not possible to give any indication of actual prices. The authority in all such matters is the Lands Department in the capital city of each State. Estimates of values and potentialities of any specific piece of land are readily available from Government, as well as from reputable private sources.

In choosing districts and areas, settlers can obtain the advice and assistance of the various land departments in the different States, as well as those of the even more disinterested Commonwealth authorities dealing with rural matters. Perhaps the best course is to consult the Federal authorities first, as to the State most suitable, all things considered, in which to settle. Then to approach the land department of that State for more detailed advice, especially regarding the most promising locality.

There is, however, one general piece of advice that must be emphasized here. Settlers from overseas, eager for a life on the land in Australia are strongly advised to acquire some practical experience of Australian conditions before purchasing or taking over a property on their own account, because conditions, climatic and otherwise, differ in so many ways in Australia from those obtaining in Europe or the United States. The immigration officers in all the States are in a position to give

advice in each individual case, as to the best way of gaining experience, including normal employment on an Australian farm or station.

Conditions for country workers have been improved considerably during recent years. Annual holidays on full pay and prescribed standards of living accommodation, as well as rates of pay, have in many places been settled by Court awards. At the same time, relations between workers on the land and their employers are usually on a close personal basis, with a spirit of mutual interest and goodwill noticeable on practically all properties. This also assists employed hands to further their practical experience. On farms, sheep and cattle stations, orchards and dairies most of the men have chances of studying and practising up-to-date methods, including irrigation and soil and water conservation.

The old myths about the wool on the sheep's back and the apples on the tree growing money for the fortunate settler without effort or capital on his part were banished long ago. Yet many of Australia's most successful farmers started with little or no capital. Many of them, however, gained local experience as wage-earners and then entered on what has already been described as share-farming. In this system the usual procedure is for the owner of the land to provide plant, seeds, fertilisers and all the farming requirements while the share-farmer provides the labour. Instead of drawing wages, he receives from one-third to one-half of the returns, according to the agreement made. This form of farming has proved highly successful. On both sides the incentive of an increased—and probably yearly increasing—return, urges each to do his best.

Only brief mention is necessary here of the generous social services of Australia. The money is obtained from an addition to the Income Tax, so that it is *paid by all classes of society*, except the very poorest. It is a somewhat heavy impost for a young and prosperous country wherein there is profitable and congenial work for all. The social service contribution rises on a graduated scale, based on taxable income, to a maximum of one

shilling and sixpence in the pound. A subsidiary revenue is also derived from a "Pay-roll tax."

All employers, whether residents or non-residents, who pay wages in Australia in excess of £A.1,040 per annum are liable to this peculiar tax, which amounts to two and a half per cent, or sixpence in the pound, on all wages paid over the above figure. This affects all large employers, whether industrial, agricultural or domestic.

The revenue obtained from these two sources goes to the National Welfare Fund, which meets the expenditures on the following health and social services. There is, first, the maternity allowance, which varies from fifteen pounds for the first child to seventeen pounds ten shillings for the fourth and subsequent children. Then comes Child Endowment, which provides a weekly payment of seven shillings and sixpence for each child under sixteen, in excess of one, maintained by any person. Invalid pensions come next, and any person over the age of sixteen who has resided in Australia continuously for not less than five years may receive, subject to a means test, if totally incapacitated or blind a pension at the rate of one pound seventeen shillings and sixpence a week. Wives of invalid pensioners also receive fifteen shillings a week for the first child under sixteen. Old age pensions are payable, subject to twenty years residence and a means test, to men over sixty-five and women over sixty at the rate of one pound seventeen shillings and sixpence a week. A widow of fifty-five years of age is eligible for a grant of one pound twelve and sixpence a week, which is increased by ten and sixpence if she is maintaining one or more children under sixteen. There is a residential qualification of five years immediately preceding the date of claim and a means test. A widow under fifty years of age who is left in necessitous circumstances at the time of her husband's death, may receive an allowance at the rate of one pound twelve and sixpence a week for not more than twenty-six weeks immediately following the date of bereavement. In fact, a widow of any age with one or more dependent children receives £2 2s. 6d. a week.

The Unemployment and Sickness benefits apply to persons between the ages of sixteen and sixty (women) or sixty-five (men) whose normal earnings have been interrupted through unemployment or temporary incapacity for work. Subject to an income, but not to a property test, a sum of one pound fifteen shillings is paid to adults and married minors, with additional payments for dependents, such as a wife, of one pound and five shillings for one child under sixteen. The allowable income is one pound a week. Unmarried boys and girls between seventeen and eighteen receive fifteen shillings a week, which is increased by five shillings when the recipient is between eighteen and twenty-one years of age. All these benefits, normally, are subject to a residential qualification of one year, but arrangements have been made to apply them to migrants from the United Kingdom from the date of their arrival in Australia.

There are about six hundred hospitals and everyone has a right to free treatment. In the country there is the Bush Nursing Association ; while those living in the more remote parts receive medical attention from " Flying Doctors." This somewhat unique and much appreciated service is operated by the Australian Aerial Medical Service, running air ambulances from bases at Port Kelland, Wyndham and Kalgoorlie in Western Australia ; Concurry in Queensland ; Alice Springs in the Northern Territory ; and Broken Hill in New South Wales.

The whole question of taxation, wages and costs of living can only be adequately dealt with in the form of tabular statistics, which will be found in the appendices. A system of " Pay-as-you-earn " operates in Australia on the same lines as in Great Britain ; and the once separate Social Services contribution is now collected jointly with the income tax. Limited companies pay this consolidated levy ; and there has been a sales tax, in addition to death duties, entertainments tax, pay-roll tax, and motor taxes. A formidable array, which, however, is being steadily reduced and counter-balanced by slight rises in wages and a drop in the cost of living.

Chapter 18

THE PRIMARY INDUSTRIES

THE interior of Australia—mostly flat, largely featureless, and comparatively waterless—remains almost entirely the realm of the fabulous merino. The rich pastoral industry, the largest single undertaking in the country, notwithstanding the recent remarkable development of manufacturing, accounts for about thirty-one per cent of Australia's exports and comprises approximately one-sixth of the world's flocks of sheep. A hundred million of these valuable little animals graze on the pastures of this continent, and yield, if their wool, lamb, mutton and sheepskins are included, a yearly income of £A.118,000,000. Wool, alone, accounts for about £A.90,000,000.

Much has been said in previous pages about station life in the vast interior of the continent and there remains only to be summarised, in this account of all the important industries of Australia, the part played by the merino and its relatives in the national economy. This I propose doing with as few statistics as possible and with the aid of a mass of information kindly placed at my disposal by the Federal Government.

When Captain John MacArthur, a leading colonist, brought eight sheep from King George III's own flocks in England to New South Wales, in 1805, this "mainstay of the nation" for many subsequent years was unwittingly initiated. They were merinos of Spanish origin, the progenitors of the present huge Australian flocks. These do not in general thrive on rich pastures. Most merino grazing grounds have rather low rainfall

and, to the European, appear uninviting. They extend from the island of Tasmania in the south, through the regions of western and northern Victoria and southern New South Wales, then up across central and western New South Wales, north into Queensland and across the tablelands to the coast. There are also wide sheep lands in South and Western Australia. Nearly half of Australia's sheep are, however, in New South Wales.

Most flocks—about 40 per cent—consist of from 250 to 1,000 sheep each. The last survey showed 38 flocks of more than 50,000 each and some exceeding 100,000. Most sheep stations are between 1,000 and 5,000 acres in area, and 14,000 out of 34,000 of these properties are in New South Wales. Of the large sheep stations, 1,544 exceed 50,000 acres each. Western Australia contained 373, New South Wales 198 and Queensland 187 stations, each exceeding 100,000 acres.

The secret of this astonishing productivity on poor land is the one hundred years of careful breeding during which the original stock was adapted to conditions. Although the Australian fine-woolled heavy-fleeced merino is descended from the original Spanish stock, it is a very different animal, being bigger, hardier and much more woolly. The basic stock is of the famous Peppin strain, named after the Peppin brothers, who established a flock at Wanganella, New South Wales, in 1861. There are now more than seven hundred studs registered in the Australian Merino Stud Book, of which ninety per cent have Peppin blood.

MacArthur's first merinos each yielded about four pounds of wool annually, compared with the present average Australian fleece of longer staple, weighing about nine pounds. Moreover, the Australian sheep has a strong constitution, with remarkable powers of resistance to drought. Many stations have no water, except that obtained from storage tanks and artesian wells, and no improved pastures or arable paddocks. Flocks graze on indigenous grasses and scrub, some saltbush and edible roughage.

For a century Australians produced only merinos

because of the country's distance from overseas markets. With the appearance of refrigeration, crossbred types, or "freezers" were also developed. Many breeds were tried until strains were obtained that are now as carefully preserved as the merino. They are chiefly found on the well-grassed and watered country a little back from the coast. In these areas, a majority of the flocks are crossbred, from an increasing use of rams of British breeds. Some are raised principally for meat and some for both meat and wool. About thirteen million sheep are slaughtered annually.

The principal primary industries of this great continent are the production of wool, wheat, meat, dairy produce, fruit and vegetables. Although efficiency and a high degree of mechanisation have brought about increased rural production, the number of people employed in rural industries has tended to fall. The number engaged in farming of all kinds is about 400,000. There were a large number of station employees in the armed services at the date of the last official estimate.

Just as the industry's disasters in bad years are startling so are its successes in good years. Sheep die at times by millions—fifteen million died in the 1944 drought, and five million have died since—but they also multiply by millions. Success occurs, however, only in the case of those who thoroughly understand their business. Flocks must be protected from many enemies—rabbits and kangaroos can eat or otherwise destroy pastures; dingoes (wild dogs) or crows maul the sheep, particularly the lambs; various diseases and insect pests, particularly blowflies, quickly decimate them. The newly born lambs must be tended. The best strain for the land must be chosen. The number per acre that the land can support must be judged. Dipping, crutching, drenching and mustering must be thoroughly carried out. Only if all of these and other tasks have been properly performed, will the grazier attain successfully his objective—the shearing.

A good hand can shear two hundred sheep during an eight-hour working day, and may earn £A.400 or more

during a season. Shearing sheds may be anything from two-stand to forty-stand—the stand being the place on the board where the shearer works, where the comb is connected with an overhead driving shaft or a plug, if electric handpieces are used. A few sheds contain one hundred stands or more and can handle up to 500,000 sheep during a season. The shearer drags a sheep to the board, turns it to the correct position, and goes to work. He goes through his pattern of shearing "blows" in line with other shearers. His quick, regular movements do not cease until the sheep is shorn. Immediately an animal is passed on, another is grabbed, and the operation is repeated until the pens are empty. As fleeces come from the shearer, they are flung on a stand to be classed. The Australian wool-classer commonly handles from seven hundred to one thousand different varieties of the one thousand six hundred in the Australian catalogue. Once classed, the wool is baled, marked and carted to the nearest railway siding for transport to the buying floor, mainly in the capital cities, although there has been a recent increase in country auctions.

Australia was for long content to grow wool chiefly for export, but local manufacture has become a substantial industry. During the years 1939-45 more than a million British, Australian and American service men and women were supplied with clothing and blankets, while many thousands of sheepskin vests were made for British soldiers. After hostilities ceased the woollen manufacturers of the country supplied over a million yards of cloth to the principal relief organisations, while, at the same time endeavouring to overtake the lag in local market supplies. They had, first, to produce the great quantities of cloth required to supply civilian clothing for nearly six hundred thousand men and women from the fighting forces. Rationing of civilian clothing was enforced for many years after the cessation of hostilities, but was abolished in 1948.

Australia's woollen mills number about 120, and employ some 23,000 work people. In addition, about 325





Above : BANANA GROWING, NORTH COAST, NEW SOUTH WALES

Below : LOADING LOGS IN COOPERNECK STATE FOREST, N.S.W.



knitting mills employ another 20,000. The industry's annual output is about 29,500,000 square yards of cloth worth £A.7,500,000, as well as large quantities of high-grade fingering wools and machine-knitted garments valued annually at £A.13,000,000. Most firms guarantee their products as one hundred per cent pure wool and, after a special process, unshrinkable.

Although dating back to 1863, there has been, during quite recent years, a marked improvement in the quality of Australian cloths. To-day experts compare them favourably with similar goods from other lands. Nearly seven million yards are now exported. Not only are the prospects bright for the Australian manufactured product, but the future of the whole wool industry seems assured, despite competition from other fibres and artificial products. As an insurance against the future, world-wide publicity in favour of wool is being undertaken; and £A.7,000,000 comprising the profits of wool realisation during the war has been allocated to research, as a result of which it is confidently expected that many new uses for wool will be found.

The importance of wheat in the Australian economy is illustrated by the fact that the crop is worth about £A.40,000,000 a year and occupies nearly sixty per cent of all land sown to crops. It is a staple crop on about sixty thousand farms and a prime source of livelihood to about two hundred thousand persons. Internal consumption of wheat is small compared to production, averaging about sixty million bushels. The export trade in wheat and flour is therefore vitally important to the national economy as well as to the wheat-growers. Although only about tenth among producing countries, Australia ranks third among the world's wheat exporters, and until the war was the leading exporter of flour, shipments having been as high as 725,000 tons in a year.

Britain has always been the principal buyer of Australian wheat, shipments averaging from forty to fifty million bushels a year.

Opposite—A Wheatfield in western New South Wales.

The Australian "wheat belt" extends in a fairly well-defined strip about 150 miles wide from the Darling Downs in Queensland, through New South Wales and Victoria into South Australia. In Western Australia there is another somewhat similar belt running from Geraldton on the Central West Coast in a broad sweep to the Southern Coast at Esperance Bay. The wheat belt lies on the inland slopes of the coastal ranges and on the adjacent plains, in a rainfall area varying from around twenty inches down to about ten inches a year.

Australian wheat farms range in size from small, usually mixed farms of not less than five hundred acres on the average to large specialised wheat farms, although in the inter-war period there was a growing development of the practice of combining fat lamb raising with wheat as part of a soil fertility improvement programme. Some indication of the farm structure is afforded by the fact that thirty per cent of the Australian wheat-growers produce about seventy per cent of the crop, small farms contributing the remainder.

When the first European settlement in Australia was established, on 26th January, 1788, on the site of the present city of Sydney, no sod of Australian earth had ever been turned by spade or plough for human use, for the aboriginal natives had no agriculture. With the object of feeding the 997 persons in his care, the Governor of the new settlement, Captain Phillip, established Australia's first wheat farm on what is now Sydney's Botanical Gardens. This was not successful, but at Parramatta, some fifteen miles inland, the first wheat harvest was gathered in the following year. The land did not welcome the innovation, however, and ten years later there were still fewer than five thousand acres under precarious cultivation. Not until the discovery, in 1813, of a passage across the coastal ranges, the Blue Mountains, was there any marked expansion.

By 1858 the total area under all crops exceeded one million acres, but it was not until years later that sufficient wheat to meet Australia's growing needs was produced. After 1860, however, there was steady but

slow progress, although the acreage sown to wheat increased faster than the crop harvested. The reason was a serious decline in the yield per acre, due to one-crop husbandry. For the five years ended 1865, the Australian average yield was 11.2 bushels per acre. Twenty years later it was only 5.4 bushels. Then came the fertilizer, superphosphate. It had been shown that a principal cause of the declining yields was exhaustion from the soil of its available phosphates and the application of "super" corrected this. By 1900 the area under wheat was approaching five million acres and the average crop for the first ten years of this century exceeded fifty-six million bushels, about twelve to the acre.

Another factor which assisted the growth of the Australian wheat industry was the work of William Farrar and other plant breeders. By 1898, after nearly ten years' work, Farrar succeeded in producing wheat adapted to low-rainfall areas under what is termed "dry-farming" methods, and by 1902 he was able to distribute bulk supplies of his famous "Federation," a high-yielding but not particularly "strong" milling wheat.

The development of "Federation" wheat and its successors enabled wheat-growing to be extended into the drier areas. This, together with the use of fertilizer, the early introduction and subsequent high development of mechanisation of farm operations, and the combination with wheat-growing of fat lamb raising based on a suitable crop rotation system, have been major stages in the agricultural conquest of this ancient land, a battle for which the first settlers were so ill-prepared. After the turn of the century, despite fluctuations in the area sown and the crop harvested, due to the vagaries of the climate and to price movements, progress was relatively steady, and wheat-growing became not only Australia's greatest agricultural industry, but also economically her second most important primary industry.

The experience gained in quite recent years of the value of wheat as a food, under proper conditions, for all classes of livestock—including sheep and dairy cows—

may be expected to result in considerable use of grain for this purpose, whenever the relative prices of wheat and animal products permit. Australia is certain to maintain her prominent position in the world's wheat trade because she is a natural wheat-growing country. In normal seasons, weather conditions are favourable during the whole of the growing season and especially at harvest-time. The suitability of the soils, the topography—wide plains and gently rolling downs—and the possession of a successful and still developing production technique give the Australian wheat-growers a competitive position *vis-a-vis* their fellow-growers in other lands which is likely to become stronger as the years pass.

Ranking third in value among the nation's primary industries, dairy production accounts for £A.40,000,000 a year. It is, however, more restricted in scope than either wool or wheat. It is carried on mainly along the East Coast, where there is abundant rainfall, ensuring rich grasses. There are also several important irrigation districts in South Australia and Victoria where dairying is the main occupation. The principal States are, however, Queensland, Victoria and New South Wales, which together yield butter, cheese, milk, eggs and poultry to a gross average value of over £A.40,000,000 a year. The normal butter production ranges from 140,000 to 200,000 tons a year, of which somewhere about 60,000 to 100,000 tons is exported, Britain receiving over 50,000 tons a year. This last figure could be stepped up very considerably with advantage to both countries. The cheese production varies greatly. It has reached 40,000 tons, of which Britain received up to eighteen thousand tons.

Dairy farming, for the production of milk, butter and cheese, like Australia's other major rural industries, has its roots in the first days of British settlement. Like them, also, it was at first fraught with unforeseen difficulties arising from the unfamiliar environment. That early farming troubles were due rather to the first

settlers' difficulty in adapting themselves and their traditional methods, than to the inherent qualities of the country is illustrated by the fate of two bulls and four cows which were lost in the bush from the tiny herd brought out by the first fleet. All trace of them was lost for some years. Then healthy wild cattle were discovered roaming some distance inland in an area which came later to be known as the "Cowpastures," and which to-day is part of the Sydney City milk supply zone.

There is, in the highly developed industry of to-day, another interesting link with the past. One of the earliest town milk supply dairies in the colony of New South Wales was owned by a Dr. Harris, whose farm was some two miles inland from Sydney Harbour. To-day, in a city street named after him, in an area named after his farm and on the site of his dairy, the largest farmer-owned co-operative milk distributing organisation in the British Empire, with an annual turnover of about thirty million gallons of milk, has its headquarters and milk processing plant.

Australian dairy farming owes its growth from a somewhat precarious capacity to meet the needs of the growing population, to three developments which all occurred late in the nineteenth century and within a period of about ten years. These were the introduction of refrigerated storage and transport, the development of the Babcock test for determining the butter-fat content of milk and the demonstration by an enterprising farmer on the north coast of New South Wales of the value as a dairy pasture of the grass "*Paspalum dilatatum*." The first enabled dairy products to be exported to Europe ; the second assured the farmers a just payment for the butter in their milk ; and the third brought great areas in New South Wales and Queensland, previously useless for cattle grazing, into highly profitable production.

The economic importance of dairying is indicated by the employment figures, nearly two hundred thousand persons being directly engaged on more than fifty thousand dairy farms and in five hundred and twenty dairy factories. Britain has always been Australia's principal

overseas market for dairy products. Dairy farms vary considerably in size, according to conditions of climate, soils and situation, but in the better districts may be taken to range from 150 to 300 acres, carrying milking herds of from about 30 to 100 cows or more. There are many smaller farms and herds, and some large farms on which as many as 600 cows or more are milked. However, the latter are exceptional. Mechanisation has reached an advanced stage on farms, especially with the extension of electricity supply and the war-time shortage of labour. Where irrigation is available, the average farm is less than one hundred acres in area, but the carrying capacity is considerably higher than in non-irrigated country and ranges up to a cow to the acre all the year round. In Australia, because of the climate, the housing of dairy cows, as in Europe, is unnecessary, and except in the colder southern districts of the mainland and in Tasmania, even winter rugging is not usually required.

Supervision of equipment and operations in the farm-dairy and in the butter, cheese or milk processing factory, is both comprehensive and strict, to ensure the maintenance of the uniformly dependable quality for which Australian dairy products are noted. State Departments of Agriculture maintain staffs of trained instructors to guide farmers and to supervise both farmers and factory employees with respect to proper standards of hygiene. The Commonwealth Department of Commerce and Agriculture strictly supervises all dairy products submitted for export. Its officers grade produce according to quality, to ensure that export brands on packages correctly indicate the quality of the contents ; and that all produce, in fact, conforms at time of shipment to the requirements as to type, quality packaging, and brands. As a further check, an officer is stationed in London to report on the condition of products on arrival.

With the exception of horses, there has been a steady increase during the past ten or fifteen years in the number of livestock in Australia. Apart from sheep, the next

most important among the animal population of the continent is cattle. There are between 13,200,000 and 14,000,000 head of cattle in the country; but the numbers vary considerably as the slaughterings account for some two and a half to three million beasts a year.

Australians are normally among the world's greatest meat consumers, averaging before the war more than 128 lbs. of beef and veal, about 70 lbs. of mutton and lamb, but only about 17 lbs. of pig meats per *capita* per annum. This, combined with the great export trade, which ranks fourth among Australia's exporting primary industries, has given the meat industry a place in the front rank of the nation's agriculture.

The annual production of beef ranges from 455,000 tons to 500,000 tons a year. Mutton and lamb account for 300,000 to 400,000 tons and pig meats supply about 100,000 to 120,000 tons of the gigantic total.

Australia has no native meat-producing animals, although some of her marsupials are edible. The country's meat, therefore, is all provided by introduced animals, and the early history of the industry was marked by the troubles arising from adapting cattle, sheep, and pigs to new environment. The livestock statistics reflect the success of the early pastoralists in overcoming these difficulties; while Australia's position in world trade in animal products reflects their ability, despite geographical and climatic handicaps, to challenge successfully the established stock-raisers of other lands. Statistics show, also, the prompt response of stock-raisers to the new opportunity presented by refrigeration, the invention of which in the 1880's, first made possible a major export trade.

Once the sea transport of perishable foods over long distances became possible, Australia quickly took a prominent place in the world's trade in meat. By 1897, her exports of beef to Britain approached 30,000 tons. However, Argentina entered the trade, and by 1904, aided by shorter distance from her markets, had outstripped Australia. Then came the chilling process, which preserved the character and appearance of beef—

for a time—better than was possible by hard freezing, and Argentina, with a sea voyage to Europe of approximately seventeen days compared with the fifty days or more from Australia, rapidly developed an immense and profitable trade, to the detriment of the price obtainable for Australian frozen beef. The latter, however, held her place as the world's greatest exporter of frozen beef. She steadily expanded her shipments, with minor fluctuations due to seasonal conditions, until in 1938 exports reached nearly 105,000 tons. Meantime, a technique was found whereby beef could be safely held under chilled conditions for considerably longer periods, and in 1933 a New South Wales exporter, with the co-operation of a British shipping company, made the first experimental shipment from Australia to Britain. The voyage was unusually protracted, however, and the shipment was not entirely successful, but a beginning had been made.

The raising of cattle for beef is widely distributed through all six States of the Commonwealth and the Northern Territory, principally in the regions of summer rainfall. Broadly, the beef-raising area forms an immense crescent running from the Kimberley district in north-west Western Australia across the Northern Territory and North Queensland, and then south through the eastern States to Victoria. There is also some scattered cattle-raising in north-eastern South Australia and the south-central parts of the Northern Territory. The greatest cattle-breeding territory is, however, in north-western Queensland. Cattle bred here are moved east and south and large numbers are finally fattened, slaughtered, and shipped from New South Wales and Victoria. Queensland, however, remains the principal beef exporting as well as the chief producing State.

Beef, like all primary produce exported from Australia, is strictly inspected and graded for quality by officers of the Commonwealth Department of Commerce and Agriculture.

Lamb production and exports have continued to show substantial expansion; and shipments have exceeded

five million carcasses in a season. The radical change in the character of Australian lamb exports, parallel with their remarkable expansion, was due chiefly, though not solely, to recognition of the fact that prime fat lambs to meet the growing taste for this meat in Britain and other countries could be successfully bred and fattened in Australia. Depending upon seasonal conditions, between fifty per cent and sixty per cent of the carcasses and up to sixty-five per cent of the weight of lambs exported, is first grade. Another stimulant was the increasing combination of fat lamb raising with wheat-growing as one of the measures to conserve and improve soil fertility in the wheat belt.

Victoria, New South Wales and South Australia, in that order, are the principal producers of fat lambs, with Western Australia and Tasmania also breeding considerable numbers. The majority come from the wheat belt, but large numbers also are raised in the better pastoral areas, where pasture improvement is possible. Lamb production in the irrigation areas of the three main lamb States is considerable and increasing rapidly, the proportion of prime quality carcasses produced on improved pastures under irrigation conditions being high.

Pig-raising is carried on chiefly in conjunction with dairying, the conversion of skim milk into pork being most profitable. Considerable numbers of pigs are also raised in the wheat-growing areas, especially when wheat prices are relatively low and the crop heavy. There is likely to be a considerable increase in both the production and export of pork and bacon in the comparatively near future, especially from Queensland.

An important factor in the establishment and maintenance of high-quality standards for meat exports is the fact that stock to be slaughtered for export comes under the supervision of Commonwealth officers on arrival at meat-works, and this supervision is maintained until the arrival of the meat in Britain, where an officer of the Department of Commerce and Agriculture is stationed. Meat-works are closely supervised and required to

conform in design, construction and equipment to standards which have been laid down to ensure proper hygiene during treatment and storage and to preserve the quality of the meat. The importance of the export trade to the Australian meat industry is reflected in the situation of meat-works, most of which are located at suitable shipping points around the eastern and southern coasts, from Townsville in North Queensland to Port Lincoln in South Australia. There are also export meat-works in Tasmania, and in Western Australia at Fremantle and at Wyndham on the far north-west coast. New South Wales and Victoria support a number of export works at inland centres.

From beginnings on a twenty-acre farm near Brisbane, Queensland, in 1863, has developed the Australian sugar industry, which now extends for 1,300 miles along the north-east coast of the continent and normally produces over 800,000 tons of sugar—substantially more than Australia's own requirements.

The first sugar canes known to have been cultivated in Australia were introduced from the Society Islands in 1817 and 1819 and were grown on the sub-tropical coastal belt of northern New South Wales by Thomas A. Scott, who, by 1827, succeeded in producing as much as seventy tons. But his venture was unsuccessful, and it was not until 1863 that Captain Louis Hope, generally conceded to be the father of the Queensland sugar industry, established it commercially on land granted to him by the State Government. Land was also made available to others on easy terms, and by the end of 1867 nearly two thousand acres were under cane and six mills were manufacturing annually a total of 168 tons of raw sugar.

To-day, the cane belt extends along the river flats and fertile valleys near the coast from the Clarence River, New South Wales, to just north of Cairns, Queensland, and the annual value of its output in normal years is over £A.13,000,000 of which about ninety-three per cent comes from Queensland. The cane is grown by

about nine thousand farmers, whose total assets are valued at £A.32,000,000, on farms averaging about fifty acres each. The cane is cut almost entirely by hand and by cutters paid at contract rates. Although arduous work in the hot tropical sun, good cutters earn an average of £A.2 10s. od. a day for the five or six months of the cutting season. After harvesting, the cane is taken by light railways, by motor trucks and by river barges to the mills, where it is weighed and sampled. The grower is paid on the basis of weight and quality (sugar content) and receives a substantial payment on delivery. The final payment is made when the full value of the sugar, including that exported, is known, because the value of cane is determined in relation to the value of raw sugar.

Australia has thirty-five sugar mills with assets totalling some £A.20,000,000 operated either by joint stock companies or farmer co-operatives. They crush the cane and convert the juice into raw sugar, which is shipped to the refineries for purification, both in Australia and abroad. These are located in the more temperate climates, usually near large centres of population, where the bulk consumption occurs. Two principal by-products, molasses and megass, are produced in the milling. The former is used as fertiliser on the cane-fields, as stock food and as raw material at distilleries for the making of rum, industrial and medical alcohol, methylated spirits, liquid carbon-dioxide and solid carbon-dioxide, the refrigerant. Megass, which consists of the crushed fibre of the cane which remains after the extraction of the juice, is burned in the mill furnaces and provides most of the fuel required at mill boiler-stations. Some megass is diverted to the manufacture of "cane-ite," an insulating board.

The domestic market is reserved for Australian producers by means of an embargo by the Commonwealth Government on imports of sugar. In return, the sugar industry makes refined sugar available in all Australian capital cities at a fixed wholesale price of £A.33 4s. od. a ton. The industry also accepts responsibility for any loss or low prices on production which has to be

exported. No subsidy, or bounty is paid to the industry, which takes pride in the fact that all labour employed, including cane cutters and mill hands, is of European origin. It is, in fact, the only large sugar-cane industry run solely by Europeans, and it pays throughout wages fixed under awards made by industrial tribunals.

Many years ago in order to guard against over-production, millers and growers asked the Queensland Government to establish quotas of production for each mill and to allocate acreage for cane growing. Nevertheless, production of cane rose steadily until it averaged somewhere between six hundred thousand and nine hundred thousand tons. Under the International Sugar Agreement of 1937, to which all major sugar-producing countries were signatories, Australia was entitled to export four hundred thousand tons a year, plus a share of any increase in British Empire consumption beyond a certain level. During the war, by agreement with the British Government, Australia exported such quantities of sugar as shipping made possible to British and Allied countries as required by the British Ministry of Food. In addition, sugar was supplied to power alcohol distilleries.

The export of sugar now totals about one hundred and fifty thousand to two hundred thousand tons. In Australia it is sold to manufacturers, food processors, and through wholesalers to the retail trade. Much of that sold to manufacturers and food manufacturers also, eventually, finds its way abroad in the form of jams, tinned fruits, and condensed milk.

Controls imposed on the industry during the first world war led to a system, which has since continued, whereby all raw sugar as produced becomes the property of the Queensland Government. This facilitates the pooling of all proceeds from refined sugar sold abroad, enabling the payment of a uniform price per ton to each raw sugar mill. It also facilitates the granting of the Commonwealth embargo on imports. The Queensland Government has established the Sugar Board to carry out its part of the agreement with the

Commonwealth Government regarding the sale of refined sugar at a fixed price, and to collect and pool all proceeds of raw sugar. It is, of course, a system of restrictive state trading.

Some of the new canes bred and developed in Queensland are giving remarkable increases in yield per acre. The experience of a typical farmer who grew one of them, called "Trojan," was that forty-seven tons were produced to the acre where only thirty-four tons grew before. Approved new varieties of cane are released to farmers free of charge. The average yield in good years is over nineteen tons of cane per acre, giving about two and a half tons of sugar.

This product, has a unique place in the Australian economy. In 1912 a Royal Commission concluded that the unsettled areas of North Queensland were a source of strategic weakness and constituted a temptation to Asiatic invasion—a judgment which proved in 1942 only too correct. In its opinion, the justification of the sugar industry thus lay beyond questions of mere industry and wealth production. The events of the war proved beyond doubt the wisdom of successive Australian Governments in supporting the industry. It developed the vulnerable north and supplied an essential foodstuff from internal resources. It was able, with the assistance of rationing that hardly restricted Australians to below normal consumption, to provide large quantities for export to Britain and to supply the Allied forces in the Pacific as well as the islands. Indeed, the communications and facilities of North Queensland, largely owing their origin and development to the sugar industry, enabled great construction corps of men and vast quantities of equipment to be rushed to strategic points. The planes that spotted and helped to repulse the Japanese fleet in the early stages of the vital battle of the Coral Sea flew from new airstrips that tractors, requisitioned from the cane fields, had helped to build.

Fruitgrowing in Australia is a highly organised industry, which not only supplies the large and growing

demands of the Australian people, but also provides considerable exports. About 275,000 acres are devoted to orchards, and the wide range of climate permits the successful cultivation of almost every kind of fruit, from tropical and citrus fruits to the soft and the berry fruits, which require temperate conditions. Like other major primary industries, fruits are almost wholly introductions from other lands, and it was only after persistent trial over a considerable period that varieties suitable to local conditions were determined or developed. As with other perishable products, the coming of cool storage and refrigerated transport enabled the now important overseas trade in fresh fruits to be developed.

The growing in Australia of many fruits known in Europe goes back to the first settlement. An early Governor of New South Wales, Captain Bligh (of the *Bounty*) is reputed to have planted the first apple-trees in Tasmania before the settlement of that State, which has long been the principal apple-producer of the Commonwealth. Fruit growing became a major rural industry, however, largely following the introduction of refrigeration, and the development of irrigation from the major river systems of New South Wales, Victoria and South Australia, particularly the Murray and the Murrumbidgee.

The average annual value of the crop is in the neighbourhood of £A.14,000,000 from about 275,000 acres. In New South Wales, citrus fruits, occupy the leading position, although apples, peaches, plums, pears, cherries and bananas are extensively grown. The principal varieties grown in Victoria are apples, peaches, pears, oranges, plums and apricots. In Queensland, bananas, pineapples, apples, oranges, peaches and plums are the varieties most largely cultivated, while there are good quantities of paw-paws, mangos and guava among the tropical fruits. In South Australia, apples, oranges, apricots, plums, peaches, pears, almonds and olives are extensively grown. Grapes for wine are an outstanding feature of production in South Australia. In Western Australia pears, apples, oranges, plums, peaches,

apricots, and figs are the chief varieties. In Tasmania apples occupy nearly four-fifths of the fruit-growing area—the apple harvest being more than half of the whole Australian crop, but small fruits such as currants, raspberries and gooseberries are extensively grown. Pears, apricots, and plums take up most of the remaining fruit area in Tasmania.

For many years Australia has had an average of about 125,000 acres of vineyards. Of this area, 60,000 acres are for dry fruit, 50,000 acres for wine, and the balance for table grapes. Victoria has about half of the total area of drying grapes, and South Australia nearly seventy per cent of the total area devoted to grapes for wine. The average production taken over a long period of years, is 17,000,000 gallons of wine, 83,000 tons of currants and raisins, and 15,000 tons of table grapes. Britain is the principal importer of all kinds of dried fruit from Australia.

Fruitgrowing is carried on under both irrigation and so-called “dry” conditions. The principal fruits produced under irrigation are vine fruits for drying and wine making, stone fruits and pears for canning and drying, and citrus fruits. In irrigation areas, individual orchard and vineyard holdings are small by Australian standards, ranging from about fifteen to forty acres, with a few large holdings, chiefly vineyards, operated by wine-making proprietaries. Orchards on non-irrigated lands vary from an acre or two to forty or fifty acres, although the actual orchard area averages well below the higher figure. Small orchards are usually combined with other lines of production on mixed farms. In some irrigation districts the combination of dairying with fruit growing is often practised.

Australian fruit-growing is, in general, organised on a family basis, with extra hired labour, usually obtained locally, at harvest time. Some fruits are commonly dried and put through the first stage of processing on the holding, and then delivered to packing sheds for completion of treatment and dispatch to markets. Canning fruits are delivered from orchards to canneries, most of

which are co-operatively owned by growers. Fruits for marketing in fresh condition are also delivered to packing sheds for packing and distribution, although many growers themselves grade and pack their own fruit, especially for the local market.

Australia's wine industry originated with the first European settlement. When Captain Phillip arrived to found Sydney, he brought with him the first grapevines. These were successfully cultivated at Rose Hill, near Parramatta, some fifteen miles inland, and here the first Australian wine was made. Later, the first commercial viticultural enterprise was established under more favourable conditions of soil and climate on his estate, "Camden Park," about thirty miles from Sydney, by Captain John MacArthur, that stormy petrel and great pioneer of early colonisation in Australia. To-day, Australian production is from 15,000,000 to 20,000,000 gallons annually.

To the MacArthur family, Australian viticulture owes much. Dissatisfied with the varieties of vine which had survived from Captain Phillip's original introductions, MacArthur and two of his sons, in 1815, walked through most of the wine districts of France and Switzerland collecting vines and information about their cultivation. At "Camden Park" their collection of vines grew well, but proved worthless. Interest had been aroused, however, in grape-growing in the colony.

The next recorded major introduction of vines was by another pioneer of vision and enterprise, James Busby, who, in 1832, toured the vine-growing areas of Europe and returned with 365 varieties. From them come most of the varieties in Australia's present-day vineyards.



Above : AN AUSTRALIAN FRUIT FARM

Below : QUEENSLAND COTTON.





MT. MORGAN, QUEENSLAND, ONE OF THE RICHEST GOLD AND
COPPER MINES IN AUSTRALIA.



GOVERNMENT HOUSE, PERTH, WESTERN AUSTRALIA

Chapter 19

THE MINING INDUSTRY

GOLD gave to Australia not only the first uplift of great wealth but also the first incoming surge of the tide of population. Coal, as almost the only source of her power, came timely on the scene in payable quantities to provide transport to and from her shores and over her vast peopleless spaces. Iron appeared early to make possible the secondary industries that have given stability to the whole country and victory in the Pacific to the Allied arms. Now there are indications in many places of uranium and thorium, just when atomic energy may change the face of the world. Only oil has played Australia false—but the Northern Territory, or her own colony in New Guinea, may yet supply even that want.

Lucky Australia!

And now, with a record of past production exceeding in value £A.1,500 millions, mining still provides a revenue from the soil of £A.40,000,000 a year to help this country to recover from the terrible blows of the Second World War. Since 1851, over £A.780,000,000 worth of gold has been won from the mines and alluvial fields, and who will say there are no more Bendigos, Ballarats, or “Golden Miles,” still hidden in the little-known heart of this continent?

The two great periods of Australian gold production were 1851-60, when more than £A.105,000,000 worth was obtained. Since those halcyon days Western Australia has been the best producing State. I shall not attempt here to follow the ups and downs of the gold output, other than to say that between 1921 and 1931 production reached its lowest ebb, due very largely to

the low price obtaining for this metal. From 1937-45 the number of miners on the gold-fields decreased from thirty thousand to six thousand, and the output dropped sharply. Once again the genii rubbed the lamp and the price of gold rose from £A.4.3s. an ounce to £A.10, sending up the total value of the precious metal reserves to £A.17,520,000. Abandoned propositions came to life and output increased. Then occurred a post-war slump, and despite the high price of gold, £A.7,000,000 is the figure given as the average annual value of the gold production. In more recent years there has been signs of a recovery ; and if mining companies and prospectors once more show courage and enterprise there can be little doubt that gold will again rank after wool and wheat as the third great Australian export.

Coal is the country's major mining product. The principal centre is the extensive field in New South Wales, where black coal of very high grade is extracted in great quantities. New South Wales coal is of vital importance to Australian manufacturing industries and transport, and in various States it is used to produce gas, steam power, electricity and coke. The total average annual production, taken over a number of years, is about twelve and a half million tons, against a record output of fifteen million tons in 1942. Serious efforts have been made more recently at reconstruction, following legislation in 1945 setting up a special board to deal with such matters as disputes and amenities for coal miners, industrial diseases and modernisation of methods. Since then slight improvements have occurred each year, but an appreciably greater output is needed to meet the growing demands of the expanding secondary industries of Australia.

Victoria produces annually over five million tons of brown coal (lignite), which is used principally for the generation of electric power and for the manufacture of a compressed coal fuel known as briquettes. A project for the expenditure of £A.14,500,000 is under consideration to extend present workings and make Victoria independent of New South Wales coal. Victoria also

produces some black coal, used principally by her railways. Queensland and Western Australia are also small black coal producers, while South Australia is developing its more limited coal resources. Only New South Wales, however, produces in quantity coal of high quality.

The coal mining industry is highly organised through its respective associations, by miners and owners, both of whom are represented on the new Coal Board, as well as the Government. Most mines are owned by private companies, but some are State-controlled, notably the Yallourn brown coal deposits in Victoria, which are worked by the State Electricity Commission, the supplier of over 450,000 users; the sub-bituminous coal mine being developed at Leigh Creek by the South Australian Electricity Trust; and the Queensland Government's open cast mining project at Blair Athol. Employment of miners in all classes of mineral production has now reached fifty thousand. About half are engaged in coal mining.

Silver, lead and zinc are other important minerals found in rich quantities in Australia, the main fields being at Broken Hill, in New South Wales, near to the South Australian border. The Broken Hill fields were discovered in 1883, and eleven mining companies had produced metal worth more than £A.202,000,000 up to 1946. The Broken Hill deposits are said to be the largest ore resources of their kind in the world. Although production fell sharply during the war, capacity for large scale exploitation will not be in question until long after the end of this century. It was a Broken Hill company, the Broken Hill Proprietary Co., Ltd., which developed the Australian iron and steel industry.

Iron exists in several States in quantities, but the only deposits in considerable bulk of high grade ore, and easy of access, are at Iron Knob, South Australia, and Yampi Sound, in north-western Australia. Estimates of resources at these places are one hundred and fifty million and one hundred million tons, respectively. In 1939 the South Australian deposits' yield had grown to

2,245,000 tons, which was shipped, according to practice, mostly to Newcastle and Port Kembla, New South Wales, ships being backloaded with coke for use at the iron works at the port of Whyalla, adjacent to Iron Knob. Operations at Yampi Sound were discontinued just before the war, but resumption on a large scale has been proceeding for some years, Australia having succeeded in producing certain steels more cheaply than and superior in quality to similar products of Great Britain or the U.S.A.

Australia's mineral resources have not yet been completely ascertained, a matter that is only now receiving attention in the form of a thorough geophysical survey. No major discovery was made during the close examination that took place in the war period, but much valuable information was obtained, and the extent of some deposits was shown to be greater than had been believed. An outstanding example was the proving of a field on King Island (Tasmania) of 2,300,000 tons of scheelite ore. The company exploiting it has received substantial Commonwealth aid and is now one of the principal world sources of tungsten.

War brought an enormous demand for copper to use in the munitions industry. A large deposit at Mount Isa (Queensland) was worked for the first time, and its output now equals that at Mount Lyell (Tasmania), which, in pre-war years, accounted for sixty-five per cent of the country's production.

Australia ranks second on the list of lead-zinc producing countries, due largely to the extraordinary size and richness of the Broken Hill deposits. The other main sources are Mount Isa, Rosebery (Tasmania) and Captain's Flat (New South Wales). Tin deposits are large enough to meet domestic needs for a considerable time. In addition, the tin fields of Malaya and Siam have been exploited largely by Australian companies.

The post-war policy towards mining is indicated by the decision of the Commonwealth Government to grant loans to assist the rehabilitation of the industry. The purpose is not only to provide employment for men who

wish to return to the mining fields, but also to encourage the speedy reopening of mines, particularly gold mines, closed during the war period.

So far, the country has had to import practically the whole of her petroleum requirements, but small quantities of oil or gas have been discovered in the north-west of Western Australia, Central Queensland and Southern Victoria, also in New Guinea. An intensive search is now proceeding for commercial quantities, discovery of which would remedy one of Australia's principal deficiencies. Deposits of shale occur in New South Wales and Tasmania, but attempts at refining have not been encouraging. So far as is generally known not a single "gusher" has been found in the whole continent.

More than one deposit of uranium and larger quantities of thorium are known to exist, especially towards the centre of the Continent. Legislation now assures Federal control over all radio-active minerals in the country. Surveys are proceeding to discover the extent of known deposits and research is being undertaken to determine the possibilities of the use of atomic energy. Rapid developments in this connection would, among other things, make feasible the transformation of much of the continent's arid interior, by making possible the conveying of vast quantities of water at a cost that would not be prohibitive.

Chapter 20

AUSTRALIA'S INDUSTRIAL REVOLUTION

NOTHING less has been occurring in Australia, since the impetus given to manufacturing by the first world war, than an industrial revolution. As a consequence, her pastoral, agricultural and mining industries no longer take pride of place, having been first exceeded in net annual value during the year 1938-9 by the output of her factories.

Although it would have been greatly to the country's advantage had this been coincident with a further rise in primary production, the development was desirable from a national point of view to provide more self-sufficiency in time of war, a lesson from 1914-18; to act as a counter to world price slumps of her pastoral and agricultural products; and, above all, to create a form of economy more capable of encouraging a rapid increase in the population, so necessary for the safety of a white continent in close proximity to the countless millions of Asia.

Here a brief incursion into the realm of statistics is necessary to show what the industrial revolution really meant to a vast Continent with less than three people to each square mile of its area, and wherein by far the greater proportion of its sparse population was already settled in its cities and towns. In 1938-39 the net value of factory output amounted to £A.203,000,000 against primary production's £A.185,000,000. Dazzling figures for a population of about seven millions; but without the latter, created by numerically far less labour, which, moreover, was largely self-supporting where food was

concerned, the former wealth could never have been made, as much of it came from the raw material of the mining, pastoral and agricultural industries, in the form of steel, coal, wool, leather, tallow and timber. These are elementary points easily forgotten where new sources of wealth are brought about by the conversion of raw materials into finished products.

However this may be, Australian secondary industries have assumed over the past quarter of a century truly remarkable proportions. In 1919-20 there were 16,300 factories employing 357,000 workpeople and producing goods to the value of £292,000,000 sterling per annum. Of this figure the net production value was estimated to have been £99,000,000. An average taken twenty-five years later shows 29,000 factories and 750,000 employees producing and selling £A.886,000,000 worth of goods which had a *net* value of £A.362,000,000. These net amounts represent the value after deducting that of the goods consumed in the process of production, as well as marketing costs.

The main factors in this amazing expansion, apart from the inflated values (25 per cent) due to the depreciation of the Australian pound, were the readily available raw materials and sources of power, derived from primary production; transport facilities; carefully controlled tariff protection, and war-starved home and overseas markets.

This transformation was undoubtedly desirable, but the eyes and energies of young Australia should not thereby be dazzled and deflected from the many sources of natural wealth that come from the soil of a whole continent and without which manufacturing would soon cut but a sorry figure. Its greatest values lie in the exploitation of the country's sources of raw material, the opportunities offered for the more rapid increase of the population, and the creation of plant, skill and self-reliance in readiness for any emergency. Indeed, this industrial expansion has shown the clear thinking which followed the first world war, for if the lesson had not then been learned and *put to practical use* Australia would

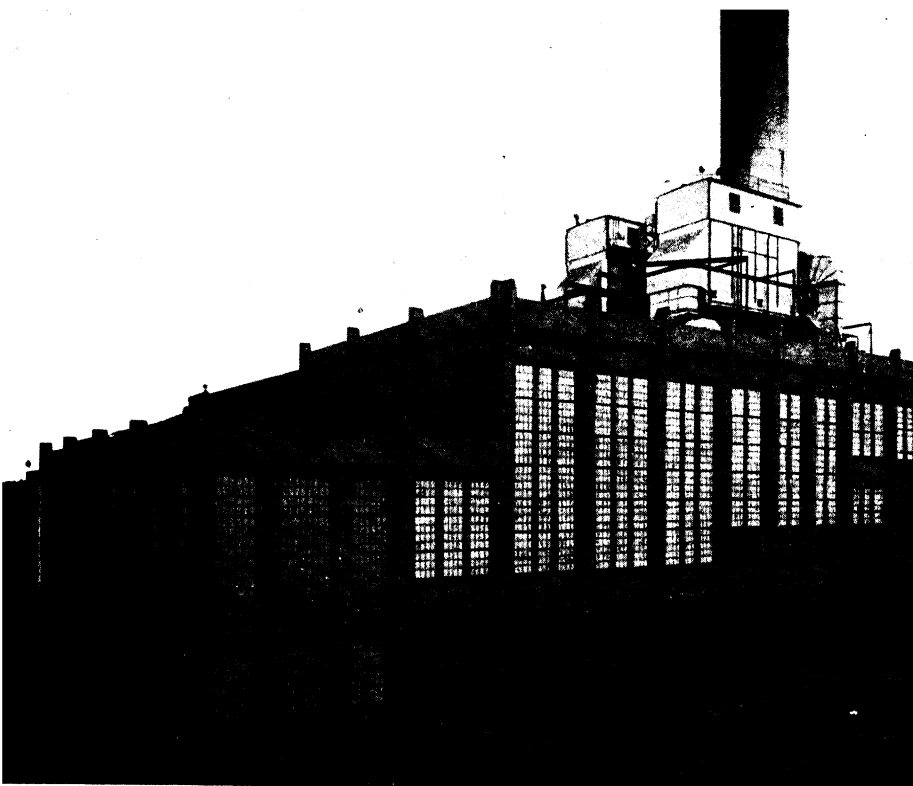
not have been able to meet so successfully the invasion perils of the 'forties of this century.

As a natural result of local demand, food and clothing have always been among Australia's most important factory products, and together with drink and tobacco, they accounted for nearly 40 per cent of all secondary output in recent years. The demand for these products by Allied forces in the Pacific was heavy, and between 1940 and 1945 employment increased from 87,000 to 105,000 operatives in food, drink and tobacco processing, canning and packing plants, the production of which jumped ahead by 38 per cent. Clothing establishments in the same period rose from 4,270 to 4,773 and production by 59 per cent. There are now some 86,000 operatives endeavouring, like those in food and allied plants, to meet widening post-war demands.

Developments in the wool textile group which has increased its output by 58 per cent during recent years have already been noted. In the chemicals group output increased from an annual average value of £A.33,763,070 in the period 1939-40 to £A.60,162,74 in 1944-5. Thanks in great measure to her efficient heavy industry, the development of which is perhaps the most striking story of Australia's industrial change.

Just prior to the war, about 28 per cent of all factory output came from the industries producing industrial metals, machines, implements and conveyances. By the end of the war the heavy industries produced goods valued at £A.326,000,000 in a total of £A.892,000,000 of secondary industries production. Even under more recent peace conditions the iron and steel industries were destined to become of outstanding importance in the development of the nation as a secondary producer.

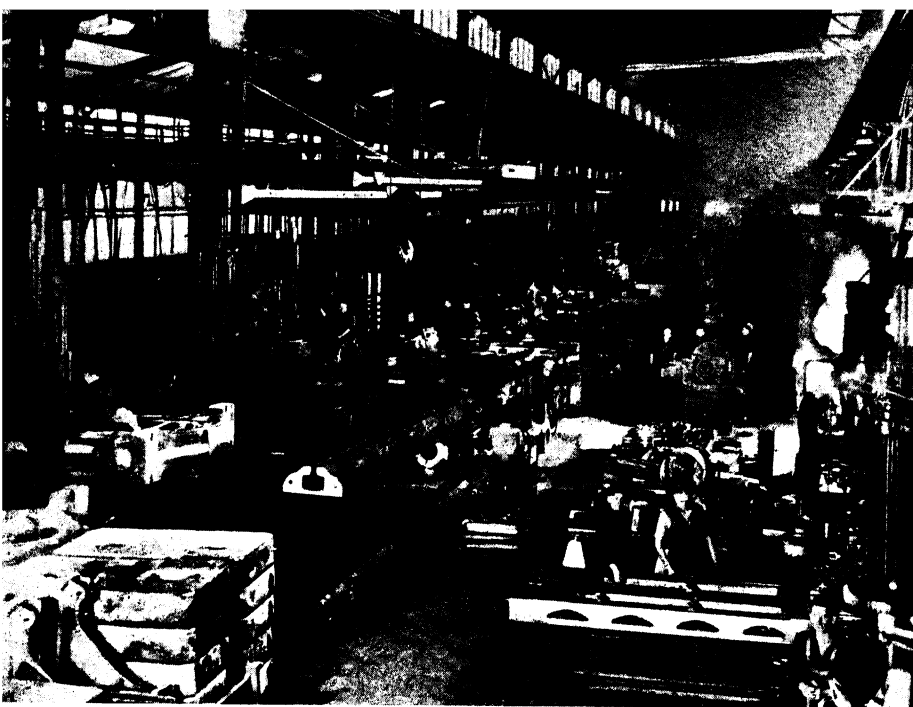
In 1908 the Commonwealth Government offered a bounty of 12s. a ton on pig-iron made from local ore, and steel made from Australian pig-iron. The major steelworks was then at Lithgow, New South Wales, and its production of 3,500 tons of pig-iron a year increased sharply during the 1914-18 war, despite a reduction in the bounty to 8s. a ton. The company, "The Australian



Above : THE POWER HOUSE, EAST PERTH, WESTERN AUSTRALIA

Below : FREMANTLE HARBOUR, WESTERN AUSTRALIA





Above : The steel works of the Broken Hill Proprietary Co. Ltd. Newcastle, New South Wales, employing about 7,000 people

Below : Modern homes replacing old dwellings, Sydney, New South Wales



Iron and Steel Limited," expanded and transferred its works to Port Kembla, New South Wales, in 1928.

Broken Hill Proprietary Co. Ltd., had engaged in the smelting of iron ore since 1913, being the holder of leases of rich ore at Iron Knob, South Australia, assayed at 60 per cent iron. Steel works were set up at Newcastle, New South Wales, the choice of which was influenced by local coking coal, good water and harbour facilities. Steelworks production began there in 1925, and averaged an output of 190,000 tons a year until 1931. By 1940, its annual output exceeded 1,000,000 tons. The Newcastle rolling mills now produce rails, structural steel, plates, bars and rods, and a variety of steel articles more comprehensive than is obtainable from any other steelworks in the world. In addition, certain steels are produced of better quality and at lower prices than by any foreign competitor.

In 1935 the Broken Hill Proprietary Co. Ltd. absorbed Australian Iron and Steel Ltd., and the two works now produce over 1,500,000 tons of steel annually. The company operates smelting works at Whyalla, South Australia, absorbing some of the ore produced at Iron Knob. For the Whyalla industry and general purposes, a 240 miles pipeline was built to carry water from the River Murray.

This great concern is now undertaking the development of the iron deposits at Yampi Sound, in north-west Australia, in a £A.7,000,000 project. Other allied industries, such as the manufacture of galvanised and black sheet metal, wire, iron and steel tubes and pipes, forgings, castings, and nails, have been developed by various subsidiary companies.

The treatment of other metals mined in Australia, notably lead, zinc, silver and copper, and the manufacture of finished metal articles have also been developed on a large scale by a number of companies in various States. Indeed, the expansion of most engineering industries during the war period was remarkable, and to-day Australia exports much equipment which before the war she had not even begun to manufacture.

During the pre-war years, exports of Australian manufactured goods were steadily growing, particularly to New Zealand, the Pacific Islands and the East Indies, while there was some trade in iron and steel goods with Great Britain. In 1936 Australia exported more than £A.30,000,000 worth of manufactured goods, a figure which jumped in post-war years to £A.93,000,000. The latter figure includes quantities of goods supplied to U.N.R.R.A., as earlier war year figures include goods supplied to Allied forces. But, more recently still Australian manufactures of wide range are becoming better known overseas, and a future of steady progress seems assured.

A special feature of the war production was the beginning and rapid development of a machine tool industry, from two plants operating in 1939, to 188 in 1945. Of 52,000 complex tools in use in 1945, the United States had supplied 7,000, Great Britain 5,000, and Australia the remainder, valued at £A.25,000,000, as well as £A.9,000,000 worth of tools and gauges. World shortages and limited shipping rendered it impossible that more than 20 per cent of requirements for the great munitions plants could be obtained from overseas, and it rested with the genius of the country to make up the deficiency. In consequence, aeroplane construction, automobile production and shipbuilding have in recent years been based on sound foundations.

Other new industries included the manufacture of twelve different kinds of optical glass and of many types of high precision instruments. Appreciable advances were made in the radio and signal equipment industries and nearly £A.16,000,000 worth of radar, radio frequency communication and signal equipment was produced.

With the demand for vast quantities of food, the old-established agricultural implement industry—the harvester was an Australian invention—was called on to produce no fewer than 218,671 pieces of equipment. These included over five hundred kinds previously imported, such as implements for vegetable growing,

tillage, seed drills, cultivators, fertiliser distributors, cane cultivating plant and many other types. Similarly, thousands of implements needed urgently for road and airstrip construction over the greater part of a continent were quickly produced and they contributed enormously to making possible the repulse of the Japanese attempted invasion of Australia. Much of this rapid output was achieved by distributing the making of components among works in various parts of the country, with the result that the engineering industry is now more decentralised than hitherto, in conformity with present policy. A welcome result of this industrial revolution in recent years has been the increase not merely of exports of manufactured goods, but of machinery. For example, Australia is now selling in the United States earth moving equipment in competition with the more costly local products.

Factory distribution in Australia has been largely influenced by power, proximity of markets, transport and availability of labour. New South Wales and Victoria are the principal manufacturing States, with South Australia increasing rapidly. The location of coalfields fostered the industrial development of Sydney, Newcastle and Wollongong in New South Wales, and Brisbane and Ipswich in Queensland. Cheap electric power generated at Yallourn, encouraged overseas and local capital to begin operations at Melbourne, Geelong and Ballarat in Victoria.

In Tasmania, important new industries have been attracted by the availability of cheap power from a major hydro-electric undertaking which uses the waters of the lakes in the centre of the island. The stations handling energy generate 113,900 horse power, and the power potential is estimated at 1,750,000 horse power. Four deep water ports, Launceston, Devonport, and Burnie in the north, and Hobart in the south, provide the necessary shipping accommodation. New industries in Tasmania include newsprint mills, food manufacture and zinc treatment, while other long-established plants produce copper, food products, writing and high quality

paper and other goods. Tasmania has ample forests for the requirements of the newsprint and paper industries. A projected £A.3,000,000 aluminium ingot industry is being sponsored by the Commonwealth and Tasmanian Governments. Among the well-known British firms having factories in the Island State are Messrs. Paton and Baldwins Ltd., Messrs. Cadbury-Fry-Pascall Ltd., and Messrs. Kelsall and Kemp Ltd.

With smelting works at Port Pirie and Whyalla, and also shipyards and steel works at the latter port, South Australia produces a substantial amount of steel, engineering and agricultural implements and has railway and tramway workshops, motor-car body-building works and assembly lines. Chemicals and associated products are another important feature in this State, which has bright prospects, particularly as the projected £A.3,000,000 rocket testing range is also within its boundaries. In Western Australia, about one-third of all manufacturing activity is devoted to food, drink and tobacco supplies, but under the impetus of war heavy industries were also extended. The State also produces appreciable quantities of its needs in clothing, woodwork, paper and stationery. It provides a good market for articles manufactured in eastern States.

Many woollen mills are situated in Victoria and New South Wales, which, in past years, produced nearly all clothing needed by the Allied forces in the Pacific. These States also possess mineral and quarry products, railway workshops, motor-body building, electrical equipment, chemicals, dyes and paints, skins, leather, paper, printing and petroleum refining. Rubber products are overwhelmingly concentrated there, including the manufacture of most of the tyres used in Australia.

Queensland is a big producer of food, drink and tobacco, while its factories are also prominent in the production of woodwork and basketware, skins and leather. Most of Australia's sugar is refined, as well as grown, in this State. At Ipswich is one of the biggest railway workshops in the continent, and locomotives were manufactured there for use abroad during the war.

With the encouragement and at the invitation of both the Commonwealth and State Governments, overseas capital is establishing new major industries, or extending existing ones, in Australia. These undertakings include new motor works, a rayon factory, textile mills, and a carpet factory. Considerably more than £A.25,000,000 worth of overseas investment was involved by the third year after the end of the war. This capital and skill came principally from Great Britain, Canada and the United States.

Industrial workers from the British Isles enjoy a high priority not only in Australia's immigration programmes, but also in the plans of the various States for increasing their skilled workers. A Secondary Industries Commission has been at work for some time studying and advising on the future of industries of all types. The Council for Scientific and Industrial Research is constantly available to deal with technological problems. Of special interest to prospective new citizens of Australia is the fact that almost every profession and craft has a place in the national economy.

An important feature of the Government's policy on secondary industries is to encourage British and other overseas firms to establish in the Commonwealth factories, and production or assembly units, with their own personnel as far as possible, to produce goods on a competitive basis with those of other countries, and with huge potential markets in neighbouring Asia and at home. Australia should quickly find her industrial revolution as beneficial for her future prosperity as was the analogous economic transformation in the British Isles.

Chapter 21

AUSTRALIA IN NEW GUINEA AND THE PACIFIC

THE second largest of the clutter of fascinating islands that once formed a solid link between Asia and Australia has always been a no-man's land. Even to-day a very large part of New Guinea still forms a blank spot on the map and many people have only a vague idea as to its whereabouts in the world. Thrilling stories occasionally appeared in the world's press of brave police patrols making their way through fierce native tribes and opening a few square miles of the hitherto unknown to the advance guards of civilisation. Then came the Second World War and the epic story, which brought it momentarily into the full glare of public attention, of Australia's gallant fight in the pestiferous jungles which freed this territory of the Japanese invader and finally checked the southward advance of the Asiatic flood.

Administered by the Australian Commonwealth Government, about half of this large island of the South Seas, together with the Bismarck Archipelago, an area estimated to be 183,540 square miles in extent, now belongs to Australia and is therefore a grandchild of the British Empire.

The Portuguese were probably among the first to make use of this great island. As was the case with the early discovery of most of the places in that part of the globe, the Dutch and French came soon after the Portuguese, and eventually the British people were represented there. Difficulties of navigation and the hostility of the natives were responsible for the small amount of progress made in the development of the island. The German, Dutch and English authorities claimed portions, the

Dutch confining their operations to the western division of the island, and the British and Germans to the eastern end. By agreement each power had suzerainty over its own territory, and the numerous small islands adjacent.

An area of about 150,000 square miles comprised in that portion to the west of the 141st degree of latitude, is owned and controlled by the Dutch, while the eastern portion was divided among the British and Germans, giving about 90,000 square miles to each. With the outbreak of the Great European War, in 1914, Australia despatched an expedition to that portion of New Guinea which was in German hands, and was known as Kaiser Wilhelm's Land. It was captured on 12th September, 1914.

From its geographical position, and from the Japanese invasion during the Second World War, it will be recognised that the possession of this portion of New Guinea is of great importance to Australia, commanding, as it does, a strategic and valuable position so far as the northern waterways and channels of commerce are concerned. In 1883, in fact, Queensland actually annexed a portion of the territory, but the British Government at the time disallowed this action. The following year, however, a British Protectorate was proclaimed, and Great Britain assumed, by agreement with Germany, the area lying between the limits of 5 and 12 degrees South and 141 and 155 degrees East. Several of the Australian States, or colonies, as they were then, subsidised this protectorate until 1888, when it was proclaimed an Imperial possession. It is administered by a Lieutenant-Governor, with an executive and legislative council and a native regulation Board. Port Moresby was made the official headquarters, and a force of armed native constabulary was formed, in addition to the appointment and training of village constables. On 1st September, 1906, the Commonwealth assumed the administration of Papua.

This portion of New Guinea lies entirely in the tropics, and is cut off from the mainland of Australia by Torres Strait. The greatest length and breadth are

eight hundred and two hundred miles respectively. The islands comprised in the dependency include the Trobriand, Woodlark, D'Entrecasteaux, and Louisiade groups. Over eighty-seven thousand square miles of the total area are on the mainland of Papua. A chain of mountains runs from the eastern extremity and forms a central ridge, Mount Victoria (13,200 feet) being the highest point. Low, swampy land characterises the western portion of the territory, and the mountainous parts are heavily timbered. The chief rivers empty themselves into the Gulf of Papua; the Fly River drains a large area, and with its tributaries has a course of over six hundred miles in the Protectorate. It is navigable by steam launch for about five hundred miles, and in places is over thirty miles in width.

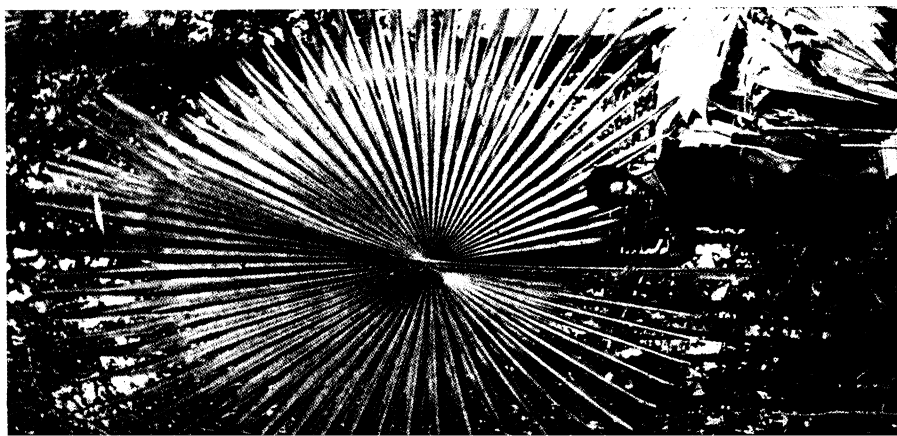
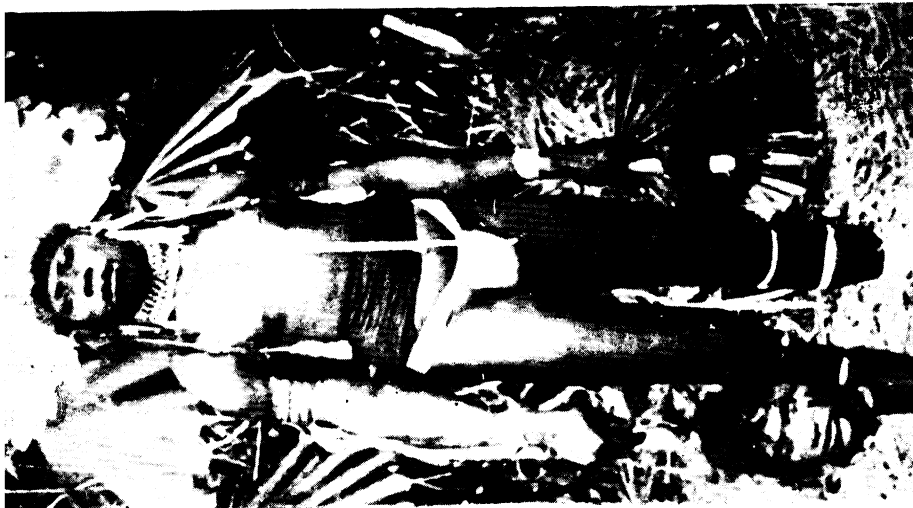
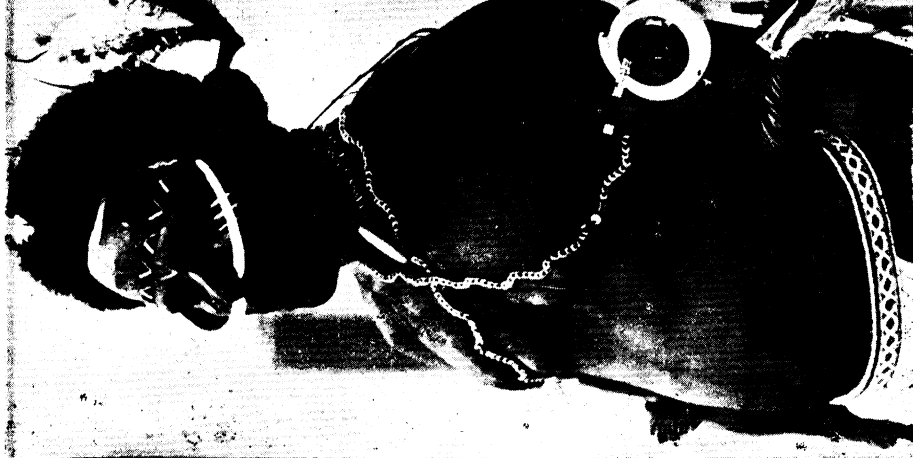
Since the termination of the Second World War no census has been taken and it is impossible to estimate the exact numbers of white people and natives living in this vast tropical land. In June, 1941, the white population of Papua numbered 3,070; and in New Guinea there were then 4,100 white people. Various languages and dialects are spoken, and the employment of native labour is controlled by Native Labour Ordinances.

The story of Australia's great work in New Guinea is an interesting one. Much of this territory is covered with almost impenetrable jungle or consists of formidable mountain and ravine. A country difficult of access but of great beauty. Land communication between any two given points is a matter of tedious journeying by pack-horse and mule among hitherto unreliable and often fiercely hostile natives.

New Guinea, however, has always attracted explorers. The fascination of the unknown and the possible discovery of great mineral wealth has lured men to penetrate its jungles, often to die at the hands of its natives. But nobody, until about 1925-6, had succeeded in getting more than thirty miles inland from the coast, or had crossed the island. The aeroplane, like the hinterland, was then unknown in New Guinea.

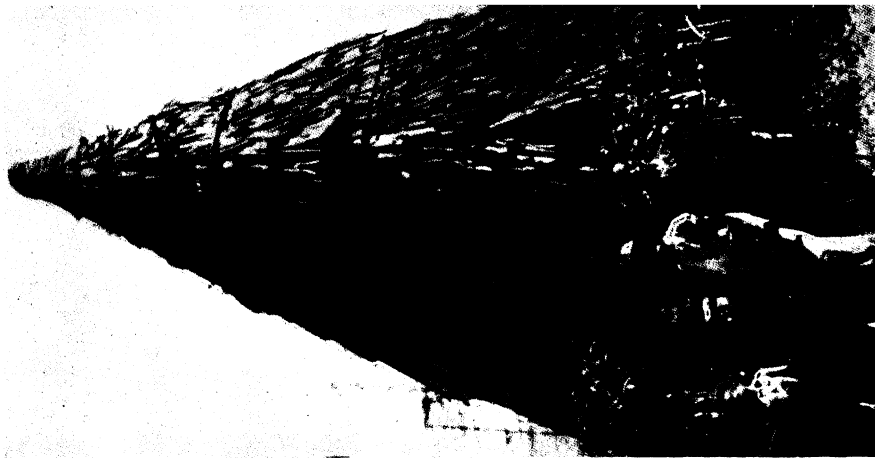
Suddenly, however, reports filtered through to Australia



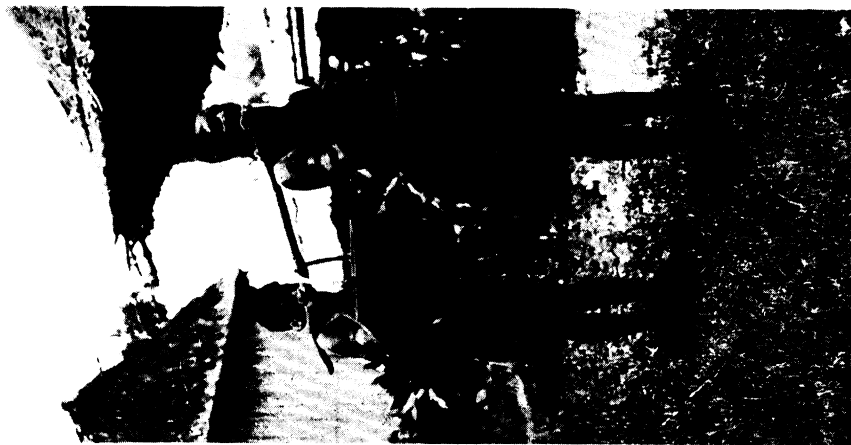




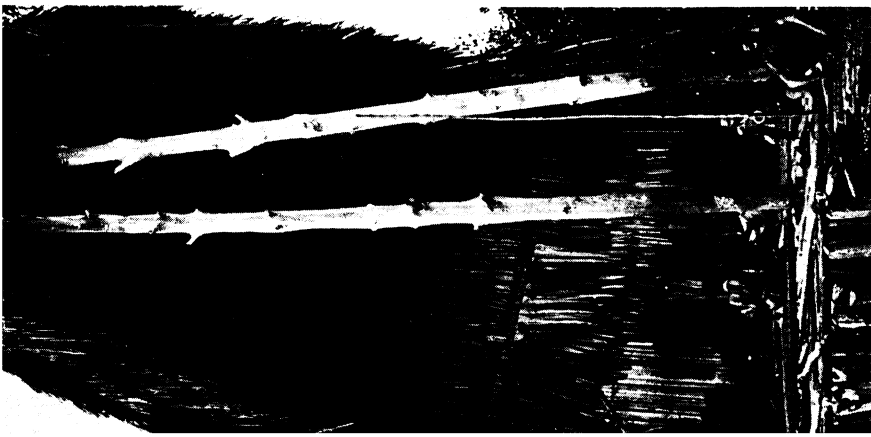
THE BEGINNING OF PORT MORESBY
1. PORT MORESBY TOWNSHIP, PAPUA, IN THE 'TWENTIES
2. PORT MORESBY HARBOUR, 1918



NATIVE BUILDING, PAPIA



NATIVE WATER CARRIERS



"KAVI," OR MAN-HOUSE, IN WHICH
BOYS ARE INITIATED INTO MANHOOD

that some adventurous prospectors had succeeded in making their way up country to an area now known as Edie Creek, about thirty miles in a direct line from the coast, but actually a fortnight's hazardous journey. There, it was said, they had found gold. Other prospectors tried to follow suit, but the place was so inaccessible, the transport of supplies so difficult, and the natives so treacherous, that they were officially warned not to attempt the journey. But gold was there, and gold is an irresistible magnet. It was only a few months before the first aeroplane made its appearance in the search for the new Eldorado. Within a year aviation had opened up the Edie Creek Goldfield.

The first flight from the coast to Wau, afterwards the flourishing centre of a field, was made in April 1927. It took half an hour, compared with a fortnight on foot. A rough landing was made, unique in that it was of necessity on a slope, and the machine had to alight uphill and take off downhill irrespective of wind direction. Ten years later there were twenty-one aerodromes and landing-grounds in Australian New Guinea. There were five air companies owning twenty-five aeroplanes, and the rough camp where the handful of original prospectors lived precariously became a civilised township of a thousand or more people, with its own shops, hospital, electric light and wireless telephone.

From the day of the first aeroplane landing at Wau the conquest of the no-man's land of New Guinea went ahead by leaps and bounds. Development in the interior by means of the aeroplane has been phenomenal. In one year more than eight hundred thousand miles were flown between the goldfields, Salomoa and Lae, the two principal seaports. Nearly twelve thousand passengers and seven thousand tons of freight were carried. The latter included all mails, supplies, mining and other machinery, building necessities and, of course, the gold won.

Prospectors began to move farther afield. It was not long before the Bulolo field was opened up. Eventually three stout-hearted brothers, Queenslanders, managed

to reach the foothills of Mount Hagen, two hundred miles by air from Lae, a journey on foot of more than three months through country occupied by hostile natives. The mountain itself is fourteen thousand feet high.

The natives in this "uncontrolled" district had never seen white men before. They were veritably Stone Age peoples, much as the Australian aborigines of the far outback, and were very hostile. The two brothers, however, won their confidence, and soon began to trade with them through the medium of cowrie shells. Other prospectors followed. They were still breaking fresh ground, when New Guinea was invaded by the Japanese. Many sought permission to enter the "uncontrolled" watersheds of the rivers, but, because of the numerous and hostile natives, only those prospectors with adequate equipment and who journeyed together in numbers sufficient to make attack inadvisable were allowed to approach these remote areas.

The method of penetration was as follows. Advance camps were first established and maintained by regular visits from aeroplanes. The Government patrol officers then made sorties into the surrounding country and tried to win the confidence of the wild mountain people and to promote understanding with them. These natives however, resented the advent and encroachment of the white man and attacked him on every possible occasion. Two prospectors who had been refused permits to enter "uncontrolled" country, eluded the officials and passed into it. They were immediately killed by the natives.

Five separate patrols were then sent out to capture the murderers. The first was attacked and there were several casualties. The second could not find their quarry, which had gone into hiding. The third, more successful, succeeded in apprehending eight natives, but while moving off with their prisoners they were ambushed. The officer in charge, six police and one servant fell seriously wounded, and two of their prisoners were killed by a shower of arrows. A desperate but organised retreat followed, packs were discarded,

and after a twenty-four hours forced march the party reached safety. The fourth patrol set out to punish the natives, but they had fled. A base camp was subsequently established on the site and patrols radiated from it, bringing the people under control.

Behind the advance guard of prospectors and patrol officers were the missionaries, who were equally unwelcome to the natives. A Catholic Missionary was attacked and severely wounded by a tribe in the Mount Hagen district. A patrol immediately set out and rescued him. But only the aeroplane made it possible, in the first place, for the missionary to penetrate into this remote and dangerous area ; and only the aeroplane made it possible a short time afterwards for him to be rescued and taken back to the coastal hospital at Salamoia where, however, he subsequently died.

The native folk live in villages surrounded by grassy flats and ridges covered with well-drained gardens, which are planted with potatoes, yams and bananas. From these highland domains, where they had lived in security for thousands of years, they were apprehensively watching the irresistible advance of the white man and his great bird. Everywhere the newcomers penetrated these unknown lands, establishing bases and maintaining contact with them by emergency landing-grounds, message-boys, signals, and by dropping stores.

Against the civilising invader, the mountain folk had nothing but their arrows and their fierce hostility. Their "bush telegraph" was inadequate against wireless telephony, their primitive tactical dispositions were unequal to the drill-book tactics of the Government patrols, their arrows proved but poor things against modern rifles, and they did not yet understand that friendly co-operation was all that was desired of them.

Those people who believe that there is little territory left in the world to explore, or that the British race no longer breeds the old-time pioneer, should know something of the work done by the intrepid police patrols and prospectors in unexplored New Guinea. Here are a few

authenticated stories, for which I am indebted to Mr. H. C. Fenton.

In the outlying districts a shadowy form of Government influence gradually merged into barbarism and it was here that adventure lurked. Mr. Hides and Mr. O'Malley, while exploring in the country north and north-west of Mount Yule, discovered that "the people in these districts carry with them as a memento the hand of a parent or other near relative who has died. The hand is worn round the neck and is fastened by a piece of string." The object of this, according to Mr. Hides, is that so long as any part of the man remains he will be remembered, but that when nothing remains he is forgotten. And a smoked hand will last for a long time. The guides with this party, who were recruited at friendly villages, carried their lives in their hands. Two Kuefa guides went with a party of police from a village but, "as they were returning to camp, two wild natives followed the party unseen and attempted to kill the guides who were in the rear. One of the Kuefas had turned on the attackers just in time and knocked one of them down with a piece of wood. Before the police could interfere he had dealt the fallen man three terrific blows with an axe. "On examining the wounded man I found three terrible axe cuts on head and body."

Mr. Hides, who was officially described as an experienced patrol officer and one of the Government's best men in the bush, made some further remarkable discoveries. After crossing three mountain ranges, eleven to fourteen thousand feet high, many rivers, including the watersheds of the Fly, Purari and Kikori, the expedition suffered severe privations, including starvation and continuous attacks from hostile natives. Their tents were rotted by the rain and they were forced to sleep under rocks or to construct bush shelters. After twenty days spent in traversing a waterless stone barrier, some eight thousand feet high, Hides climbed a tree and saw a deep valley, with slopes dotted with patches of cultivated land.

After descending into this ravine the explorers found

themselves amid thousands of light-skinned natives of Asiatic type with huge mops of hair adorned with daisies. Some wore wigs resembling Cossack hats, others had tusks through their noses. Although many of these isolated and self-contained people were friendly, some tried to ambush the patrol. One group attacked with battle axes and nearly killed a native policeman. Food was refused, and the explorers found themselves cut off in this lofty valley in central New Guinea. After a stay of two months, however, they managed to break through the surrounding mountain wall and to improvise rafts on which to travel down the south-flowing rivers, reaching Kikori in a starved and exhausted condition. Later they were taken by schooner to Port Moresby, the capital.

Here is another little story which gives some idea of life and work on the frontier of civilisation in New Guinea, and bears out the old adage that "one half of the world does not know how the other half lives." More or less authentic news was received of two white men who were supposed to have been murdered in the western division. It came in a letter from a Malay who signed his name Meli Anus. According to him the white men left in a boat which eventually went to Singapore. The letter had been given to a native ex-sergeant of police who had married a girl from the Moreshead River region and had settled in that district, and the ex-sergeant, as is the habit of all men, both black and white, who are entrusted with letters, kept it for six months before he made any attempt to deliver it. A Government Patrol Officer got it eventually, during an expedition that he made to the Dutch boundary. News of these two men was heard afterwards. They were wrecked off the coast of Dutch New Guinea, and eventually got to Merauke and from there to England; from England they went to South America, where they were "drinking delight of battle" in the war between Bolivia and Paraguay.

As a result of this expedition, the patrol officer said "I am pleased to report that friendly relations were established with the Kiaru tribe located two years ago

during the search for the Moiam raiders. Through the Kiaru tribe we ought, next year, to be in a position to establish touch with the vaguely known Gwagu tribe living on the fringe of the swamp-country north of Kiaru in the vicinity of Suki Creek. The next step will then be the establishment of friendly relations with the Titimataru tribe. With the latter brought under full Government control we ought to see the gradual extinction of head hunting in all districts of the western division that can be effectively controlled from Daru." This was the country, the people and their habits, into which Australian troops were plunged to repel the Japanese invasion a few years later.

Here is an opinion of the relative merits of bread and jam as compared with human flesh by a New Guinea cannibal. "An extensive patrol by Mr. Hides from the Mondo police camp resulted in the arrest of prisoners. . . . But there was unfortunately one casualty, for a friendly native, called Gapelu, was struck by a steel-pointed arrow, which pierced his brain, and he died in a few hours. On his previous patrol Hides and O'Malley had found, among the arrows that were discharged at their party, one which was tipped with part of an old German bayonet. Probably the arrow that killed Gapelu was fitted in the same way.

"Gapelu was killed while the police were attempting to make arrests in a native house at night, in connection with raids upon two villages by a chief called Gopa, who had, it appears, killed four men himself out of a total of eleven. It is the practice, Hides discovered, for the young men to hold the victims while the chief kills them, which would account for the disproportionate number whom Gopa disposed of.

"A local youth informed the Patrol Officer that five of the murdered men were eaten. They were cut up and cooked in stone ovens, men, women and children partaking of the flesh alike. . . . Later on Gopa was given some bread and jam. 'I asked him,' says the Patrol Officer, 'what he thought about it?' His reply was that he '*ate it well.*' I then asked him if it was not better

than human flesh. He looked at me for a moment, possibly thinking that I was trying to be funny, then he screwed his mouth up, as though to suppress a grin, and said in the most authoritative manner, ' You don't seem to understand. Man is like cassowary, only better! ' "

These glimpses of New Guinea show there are peoples in the world that have scarcely reached the Stone Age. Nevertheless, the march of civilisation goes relentlessly on despite the indescribable horrors, misery and chaos caused by the Second World War in this remote and savage island. Here some of the earth's most primitive natives are being brought under control by intrepid Australian explorers and administrators.

Properly developed the dependency of Papua is regarded as being capable of enormous production. The natural features favour agriculture. Tracts of fertile land, rich alluvial and volcanic soils cover a large area. Splendid rainfalls are recorded in various parts, while in the regions where the rainfall is lighter the conditions are favourable for the cultivation of fibres, cotton and tobacco. There are several meteorological stations throughout the territory, and an agricultural library, as well as an economic museum have been established. Since the Commonwealth Government took over the control of Papua a genuine attempt has been made to overcome the initial difficulties inseparable from the opening up of a tropical country. Experiments have been carried out by the Government with a view to checking the very heavy growth of weeds in several parts. The course adopted was to plant grasses to take the place of the weeds.

By an ordinance the natives are compelled to plant coconuts for food. To encourage cultivation the Government supply settlers with suitable trees, plants and seeds from the nurseries. There are indigenous plants also, which are of considerable commercial value, comprising sandal-wood, sugar cane, cotton plants, rubber-vines, nutmegs, ginger, bamboos, palms,

bananas, breadfruit, sago palm, and other fruits and vegetables.

Papua is rich in natural, useful timbers, over one hundred and twenty varieties having been classified. Many of these have successfully stood the test for resisting heavy strains and others are eminently suitable for coach and carriage building, flooring, lining and joinery. From the roots of the local sandalwood tree santal oil is distilled, and ebony wood is cut for export. From a species of tree grown in the hills gutta-percha is obtained, while drugs, dye-woods and spices are taken from other indigenous plants. Fairly large quantities of timber are exported to Australia and to the United Kingdom. During one year, 6,272,904 superficial feet of log-timber were sent to Australia.

Pearl-shell fishing is also a promising industry in Papua. Until recent years the operations had been practically controlled from Queensland. Bêche-de-mer is obtained along the shores and reefs, and a species of tortoise-shell of commercial value is got from the native tortoise. On the coast of the Western division there is a dugong fishery.

It is generally believed that the mineral deposits of Papua will prove of great value when properly developed. Gold, copper, silver, tin, lead, zinc, cinnabar, iron, osmiridium, gypsum, manganese, sulphur, graphite, and petroleum have already been found there. From the gold deposits, however, the best results have so far been obtained. Up to the present time gold to the value of over one and a half millions sterling has been won. Only a comparatively few white men have worked the mineral deposits and they have relied upon indentured native labour.

With a view to encouraging development, the Commonwealth Government has from time to time made grants to Papua. The revenue is derived mostly from customs, post office, native labour fees, and mining receipts. The expenditure is made up chiefly of disbursements for the Lieutenant-Governor and Civil list, Government Secretary's Department, Treasury and

Postal Department, Lands and Agriculture, Public Works, Medical Service, Department of Native Affairs, Central Court, Legislative Council and Government Plantations.

An interesting system of land tenure has been adopted for Papua. No land can be alienated in fee simple, and the rental of the leased land is assessed on its unimproved value, being subject to reassessment at certain periods. Very easy terms are provided for taking up the land. Settlers are required to plant one-fifth of their agricultural holdings within five years of the commencement of their lease; two-fifths within ten years; three-fourths within twenty years; and during the remainder of the term three-fourths of the suitable land must be kept properly planted. The maximum area which may be granted in any agricultural lease is five thousand acres.

Land for pastoral purposes may be had in larger areas, well watered and carrying good natural growths of blady kangaroo, crowsfoot, couch, scurvy and other grasses. It is provided that the rent for pastoral leases for the whole term of ninety-nine years shall be on the following terms: First twenty years—first ten years, nil; second ten years, 1s. per 100 acres; second twenty years 3s. 1½d. per 100 acres; and increasing by one-third for every succeeding twenty-year period.

When planters require land the procedure is for the Government to purchase the land from the natives and to lease it to the planters. The latter are not allowed to have direct dealings in land with the Papuans.

The misconception as to the unhealthiness of the climate of Papua for Europeans is fast dying out. Settlers and officials who have lived almost continuously in the Territory for the last fifteen or twenty years enjoy excellent health. White people may successfully avoid serious illness and live comfortably and healthily if reasonable precautions are taken. Malarial fever is not uncommon, but, owing to the discoveries made in recent years regarding the cause and treatment of malaria, it is now possible by using quinine as a prophylactic, to

obviate all serious danger from malaria. In two of the most populous centres, Port Moresby and Samaria, malarial fever is not of common occurrence.

Dysentery seldom attacks healthy persons in Papua. Provided that malarial fever is avoided, precautions taken against chills and the drinking of doubtful water, the chances of contracting dysentery are very small indeed. The territory is remarkably free from the dangerous diseases of other countries, such as typhoid fever, cholera, diphtheria, plague and scarlet fever.

The health of a white community in the tropics, especially in a new country, is often more a question of diet than climate. A regimen of tinned meats and biscuits or bread is obviously unsuitable, and yet these have been largely the staple articles of diet in this territory. Now that plantations are springing up in all parts, fruit and vegetable gardens are being more largely drawn upon, and fresh meat, eggs, and poultry are becoming plentiful.

The well-drained lands of the Territory, where the plantation industries and other settlements are taking place, will be found to be quite as healthy as places such as Java, the Malay States and Ceylon, when better living conditions are attained.

In many of the Papuan villages communal houses are built, the "man-houses" being very large, those for the women and children being smaller. In certain districts, such as the estuary of the Fly River, a great number of families live each in a separate stall of one large communal dwelling, sometimes as long as 520 feet and 30 feet wide. In the villages of the Papua-Melaneians each family has its own house.

From the Dutch boundary to Hall Sound the principal weapon is the bow and arrow. The bows, from five to seven feet in length, are made of bamboo or palm; the arrows, sometimes six feet in length, are made of reed, tipped with hardwood, bone or the claw of a cassowary. They are not feathered or poisoned. A gauntlet is used for protecting the arm holding the bow. Stone clubs are used practically everywhere on the

mainland, but are not common where stones are hard to obtain. Stone clubs are rarely used in the islands east of the mainland. In the Louisiade and Nara Islands wooden clubs are made. The spear is the principal weapon amongst the Papua-Melanesians. It is not thrown with the "womera" as in Australia. The spear-men generally use a shield when fighting. In the D'Entrecasteaux Islands the sling is used in addition to the spear.

The women usually wear a grass or fibre petticoat from waist to knee. Inland from Hall Sound, and in the Purari delta, they wear a perineal band. The men wear a perineal band as a rule, though sometimes an apron, bag, or shell is substituted.

A belief in spirits, generally malignant, appears to be universal. In almost every village there is a sorcerer, who propitiates or exorcises the evil spirits with incantations or offerings. Totemism appears to be practised only amongst the Massim. Polygamy seems to be sanctioned by native custom everywhere, but it is not very largely practised, the great majority of men having only one wife. The practise of eating human flesh, formerly in vogue in certain parts of the Territory, has now been entirely stopped in all the settled districts.

In parts of the Western Division, west of the Fly River, a mildly narcotic and stimulating drink (kava) is made from the *Macropiper methysticum*. No fermented liquors are manufactured by the natives, and the use of European intoxicants is strictly and successfully prohibited. The chewing of the betel-nut, the fruit of the areca palm (*Areca catechu*) is largely practised.

Chapter 22

THE AUSTRALIAN ANTARCTIC

ABOUT half of the huge Antarctic Continent belongs to Australia. By virtue of both exploration, and, more recently, by that of occupation, the Commonwealth has accepted control of approximately 2,472,000 square miles of the South Polar regions. It includes all islands and territories—except France's Adelie Land—which lay to the Southward of the 60th parallel of south latitude and between the 160th and 45th degrees of east longitude. Apart from the rights she inherited from the earlier English and Scottish explorers—Captain R. F. Scott R.N., Sir Ernest Shackleton, and others—Australians, such as Sir Douglas Mawson and Sir Hubert Wilkins, have been prominent in quite recent years in this great triangle of Antarctica, which has its apex at the South Pole.

It may well be asked, "what is the value of this immense frozen and desolate realm?" Quite apart from the whale fishing rights in certain of the seas hereabouts, there are known to be deposits of coal and other metals in the ice-covered mountain ranges. Although no detailed geological survey has yet been possible; and the fact that in parts of the mountain ranges, the ice is estimated to be about six thousand feet deep; there are known areas where plutonium exists, and suggestions have been made to employ the power of the great west wind in the extraction and development of this highly important metal. Although there may be a certain element of doubt as to the practicability of this ingenious suggestion, there is the certainty that a knowledge of weather conditions in, and on the

fringe of this great south land, will be of help to Australian agriculture and economy generally.

It was for this purpose that the Australian Government established a weather and scientific research station—one of a chain of similar establishments—on lonely and desolate Heard Island. This remote British possession rises 11,000 feet above the waste of icy waters which stretch between Australia and the ice-bound coasts of the Antarctic continent. Twelve Australians, including meteorologists, physicists, surveyors, engineers, geologists and a medical officer, were landed at this outpost in the great Southern Ocean in 1948. They were a unit of the Australian National Antarctic Research Expedition, which has a long-range programme in Australian Antarctica. The following is a description, by Mr. Stuart Campbell, leader of the A.N.A.R. Expedition, of the hazardous landings on Heard Island and the establishment there of the first permanent British outpost in the very centre of the world's worst weather. Heard Island lies a little to the southward of the course taken by the old sailing ships, between the Cape of Good Hope and Australia, while running their Easting down in the gale-swept realm of the greybeards of the great Southern Ocean.

We sighted Heard Island on the morning of December 11th, 1947, fourteen days out from Freemantle, Western Australia. Throughout the previous day the Royal Australian Naval ship, which was being used for the expedition—a tank landing vessel, commanded by Lieutenant-Commander G. M. Dixon, D.S.C., R.A.N.V.R.—had butted her blunt nose through a steady sea and thick fog, making a good eleven knots. The fog lifted at about three o'clock in the morning of December 11th, and, in the clear light of the Antarctic summer, we could see the snow-capped summit of Heard Island's highest point, Big Ben, above a line of clouds. It was tinged with an iridescent pink glow from the rising sun. This ice-ribbed, rock-bound

island, situated 1,000 miles north of the Great Ice Barrier fringing the South Polar Continent, and 2,400 miles south-west of Fremantle, sprawled like some gigantic sea monster in the long green swell of the Southern Ocean. It is twenty-five miles long, nine miles wide and rises ten thousand feet to the summit of Big Ben. Animal life is confined to sea elephants, sea leopards, and vast numbers of many types of oceanic birds, including petrels, skuas, gulls, and, of course colonies of quaint inquisitive penguins. The vegetation consists only of the coarse "Poa" grass, huge mounds of "Azorella" moss and an inferior variety of the Kerguelen cabbage.

We first sighted Big Ben from about fifteen miles seawards and soon the outline of the coast became visible. Towering black cliffs rose sharply from the water's edge. Vast glaciers flowed down the flanks of the mountains with imperceptible inch-by-inch motion, breaking up into small icebergs as they reached the sea. Cloud had closed in and we could not see the top of Big Ben. The whole place looked so inhospitable, we did not marvel that only four of the many previous Antarctic expeditions to pass through these waters had bothered to send landing parties ashore. Our purpose, however, was not only to land but to set up a permanent camp. The Australian National Antarctic Research Committee had selected Heard Island as the first of a chain of weather and scientific observation stations to be set up in sub-Antarctic and Antarctic waters. Guided in part by the advice of that veteran Antarctic explorer, Sir Douglas Mawson, the committee believes that greater good will come of systematic investigations by permanent and semi-permanent observers than from the more spectacular exploratory dashes.

Here we were, then, to break the ice. Commander Dixon sounded his way cautiously forward into Spit Bay and finally anchored a mile off Fairchild Beach, in fifteen fathoms of water. We believed, from our study of the records, that this place might offer a

practical landing spot and a comfortable camp site for our meteorologists. From the ship, however, we could see that the tongue of a glacier dropped steeply to the beach, where the surf ran high. It was obvious, therefore, that we should have to look further afield. Three hours later we weighed anchor and, using our echo-sounding apparatus, moved slowly northwards in moderate visibility.

The scenery was still spectacular. The scored sides of Big Ben plunged upwards into the murk. Great masses of black rock formed noble headlands. In the soft morning light of the Antarctic summer, the gently sliding glaciers showed a changing pattern of green and lilac shadows. By mid-day we had reached Atlas Cove, at the north-western end of the island, and had anchored offshore ready for a land reconnaissance. Three quarters of an hour later I stepped ashore from a bucking little landing craft with a party of our scientists and the official photographer, David Eastman. We gazed around at the cracked soil and black lava beds.

Atlas Cove is an almost enclosed bay, sheltered on the west by Cape Laurens, a 2,000 feet high cliff of black rock, and on the east by a low headland terminating in a 600 feet high rocky pinnacle, known as Roger's Head. The immediate surroundings of our landing place was a boulder-strewn, black-soil plain covered with hummocks of *Poa* grass. A big population of sea elephants, great two and three-ton creatures, took their ease all about us with the immobile lethargy of *bêche-de-mer* in a coral lagoon. There were also plenty of penguins. The great lubberly sea elephants stank to high heaven, grunted murderously if we disturbed them, but made no attempt to move. The penguins ran everywhere with vast curiosity.

Our first objective was an emergency hut laid down under British Admiralty instructions, in 1927, for the relief of shipwrecked mariners. It showed no sign of recent occupation; and the food-stuffs *cached* there seemed to be in first-rate condition, except that some

of the tins were corroded. A few days later, Norman Jones, our cook, had set up his kitchen there, and the *Cafe de Norman* became a Heard Island institution. The appetising smell of sea elephant liver, counteracted the more earthy odours of the living creatures.

At first sight, however, nobody was impressed with Atlas Cove. A driving storm of sleet and snow certainly did not add to our comfort. We established on shore a reserve dump of essential stores in case of accident to our ship, and then went back on board to make further investigations. The next few days were spent examining the coast-line of the island, hoping to find a more suitable landing place and camp site. An attempt to beach one of the landing boats at Fairchild beach, Spit Cove, nearly ended in disaster because of the heavy surf. It soon became evident that to get our stores and heavy equipment ashore by boat would be a long and slow process which might well result in serious damage to delicate scientific apparatus. We would have to try and find a spot to beach the ship, which, of course, had been constructed for this purpose during the second world war. Commander Dixon, an experienced Captain with a fine war record, which included landings on the beaches of the Mediterranean and Normandy, selected an anchorage under the lee of Cape Laurens and we took fresh stock of Atlas Cove.

"If the ship can be beached anywhere it will be over there," he told me, pointing to a long rocky spit on the eastern side of the cove, and we decided there and then on another shore reconnaissance. This time Commander Dixon and Mr. R. Drovers, our surveyor, came along. Again we did not like the look of it and decided on another coast survey before making a decision. Finally, on December 15th, we decided that Atlas Cove was our only hope. Meanwhile, we had floated our R.A.A.F. Walrus reconnaissance 'plane, which made a two and a half hour aerial survey of the island before I recalled Flight Lieutenant Smith because the ceiling had settled down below 1,000

feet and was closing in rapidly. It was, however, the first and last flight of our aircraft. Eight days later a terrific gale tore the sturdy little 'plane to pieces.

Commander Dixon spent a long time studying the approaches to the shore. Once, when he was sitting on a rock looking over the dark swelling water, I asked his verdict.

"It's as I said before," he told me. No man in his right senses would choose to beach a Landing Ship here or anywhere else on this island. But, if it's got to be, then it's got to be here." He pointed to the water. "See, there's a narrow channel, thirty feet wide at most. We have got about nine feet of water, here, close up, and it deepens to about three fathoms within three hundred feet of the beach. The spit over there, turns in a bit and gives us a little protection from the north." After a brief pause Commander Dixon went on. "We'll need all the protection we can get from those big fellows. There's a lot of weight behind waves that roll in from several thousand miles of open ocean."

It was two days before wind and tide were favourable for the great adventure. In the meantime we smashed in one of the boats while landing stores near the camp site. We had samples, too, of the contrary nature of Heard Island weather. The wind whipped down in sudden fierce squalls from off the ice-clad mountain and over the edge of the cliffs. Seas rose to mountainous heights with scarcely any warning. The sailors had hell's own delight lowering and hoisting the heavily-made landing and work boats. Once Commander Dixon had to put to sea in a hurry to ride out a fierce gale, leaving the boats, crew and some of the scientific party marooned ashore for two days.

Wednesday, December 17th, dawned fine and clear with a rising barometer and a light wind from the south-west. The tide was low early in the morning and the swell lighter than we had known it. Commander Dixon had the beaching planned down to the last detail. It was now or never. The sailors had placed

marks on the shore where they intended to drop the ramp. Leading points further back gave the coxswain steering guides for the approach.

"It just needs one of those sudden squalls from the north-west, over the edge of the cliff, and she will drive stern down into shallow water or drift broadside on to the rocks," said Mr. A. V. Gotley, our chief meteorologist, apprehensively, as the ship swung into position for the attempt.

It was a tiny puff of wind, however, which came from the south-west, that took us all by surprise. Just enough, at the crucial moment, to swing the bluff bows off the mark. We had to back out and try again. This time it all went off with the slick precision of a naval evolution. The great, awkward vessel drifted down on the swell until the coxswain had the leading marks in line. Bells clanged, engine dials quivered, the lumbering craft sprang into vibrant life and pushed a straight line of white water dead-on for the stony beach.

From the shore it looked as though the ship must run up high and dry among the sea elephants as she charged the beach. Then we saw the bow slowly rise out of the sea as she grounded on the stony bottom. At last she came to a stop, bows high in the air and the labouring engines still going "Full ahead." The bow doors swung open, the ramp settled down and bridged the twenty foot gap of turbulent icy water between her loaded lower deck and the shore.

A few minutes later our bulldozer, with Engineer John Abbotsmith at the controls, lurched like some ugly reptile out of the cavernous gloom of the tank deck and trundled noisily across the ramp, into the water, and up on to the beach, amidst bursts of excited cheering from the ship's company and the assembled scientists, we had made it. A bulldozer had at last ploughed its sharp nose into the hitherto undisturbed soil of one of the most remote islands in the world.

During the next seven days, Commander Dixon was able to beach the ship for a total of twenty-two hours.

During the whole of this time we slaved, sailors and scientists together, to unload all the heavy gear for a twelve month's stay in the island, often working waist-deep in icy water. Light stores were floated ashore in pontoons. When the weather did not permit unloading operations, the shore party made headway with the camp site.

Several times we missed disaster by a hair's breadth. Once the ship just cleared the beach in time to escape a fierce north-west squall of snow and sleet. These sudden hurricane gusts were the chief danger. They whipped in without warning. A rising sea we could anticipate but not the temperamental wind. From the beginning, our Meteorologist, Mr. Gotley, was apprehensive about the weather. It was obvious he expected something out of the box. He got it. So did we.

Late in the afternoon of December 20th, the ship's radio called in all working parties. The barometer was falling rapidly, the wind rising and a fog settling down over the island and neighbouring sea. I decided to stay ashore with the scientists. Tents were our temporary shelters. Next day the weather gave us a first real indication of what the scientists could expect in their winter quarters.

The ship bid us farewell and headed for the shelter of Cape Laurens. The wind raced down at 120 miles an hour. The waters of the Cove were lashed into fountains of angry spray. We piled heaps of stones on the bottom of our tents, built wind-brakes of cases around them and then stayed inside, hoping the canvas would stand the terrific wind pressure. The Walrus, parked on the beach, was smashed. None of us had ever seen anything like this hurricane wind before.

At five o'clock that afternoon, I contacted the ship by radio-telephone. Commander Dixon said it was the worst storm he had ever experienced and he had been at sea since sailing ship days. Gotley, who had stayed aboard to study the storm, exulted in the fact that the needle had run off the barograph after establishing a record low of 27.85 inches.

A fortnight later I stood alongside Commander Dixon on the bridge of the Expedition ship, heading into angry weather on our way back to Melbourne. The scientists were well bedded-down for their long winter ordeal. We had also put an emergency supply of fuel ashore at the lonely French possession of Kerguelen Island, three hundred miles north-west of Heard Island, ready for the *Wyatt Earp*, polar ship of the expedition, to pick up on her return from Antarctica.

Originally, I had intended to remain on Heard Island with the scientific party until the *Wyatt Earp* could pick me up. Messages from the mainland, however, indicated that the polar ship had experienced engine trouble and our programme of operations would have to be revised. Consequently, I decided to return to Australia to discuss the new problem and to prepare for the next stage in the landing ship's programme, which was the establishment of a meteorological and scientific station on Macquarie Island, 850 miles south by east of Hobart.

Meanwhile the Australian flag, which I unfurled at Heard Island on December 26th, 1947, flutters bravely above fourteen plucky young men who have faced the winter on the loneliest island in the world."

By their endurance, bravery and enterprise men of many nations have added largely to the world's total knowledge of Antarctica, but the overall story of British penetration, beginning in 1773 when Captain James Cook made the first recorded crossing of the Antarctic Circle, makes a most impressive chapter, a large part of which must be devoted to contributions by Australians in the twentieth century.

Australia's interest in Antarctica is a natural consequence of her proximity to the southern continent, the nearest point being only 1,455 miles from Hobart. Her governments and private citizens have provided money for the purpose of Antarctic scientific research. Her young men have not only offered in large numbers

to accompany every expedition that has gone south; they have served in whaling ventures both in the sailing ships of the nineteenth century and the factory ships of the twentieth.

From lonely Antarctica, northwards in a straight line for about four thousand miles stretches the great southern land and sea domain of Greater Australia. An almost inconceivably vast continent-nation of a world-wide Empire, awaiting only the awakening touch of a far, far more numerous population, with the same energy and enterprise that I saw everywhere displayed in that diverse and wide Australian Panorama.

APPENDIX I

THIS table gives examples of the wages paid in Australia to workers in a variety of trades as well as to those working on the land. The weekly wages (except where stated) are in Australian pounds, the purchasing power of which, in Australia, will be seen, by comparison, with the aid of the tables showing the various costs of living; rents have been fully dealt with in the text. The average annual income in Australia has been rising for over ten years, but seems now to have reached a balance against costs, and can be assessed at £A.320 to £A.340 a year. Although variations are bound to occur, the following figures will give a fair idea of the wages paid to workers in industry.*

Classification	Weekly Wage	
Bakers	£0 4 2 (per hour)	
Bookbinders	7 10 0	
Boot Repairers	6 19 6	
Bread Carters	6 18 0	
Bricklayers	8 15 0	
Butchers (retail shops)	6 19 0	
Cabinetmakers	7 12 0	
Carpenters	8 10 6	
Chemists, chief pharmaceutical	9 3 6	
Clerical Workers, male from	7 10 0	
Clerical Workers, female from	4 12 0	
Coal mining—		
Surfacemen (yardmen, labourers, &c.)	6 10 0	
Miners, underground	7 8 9	
Wheelers, underground	6 14 9	
Confectioners	7 0 0	
Cooks 1st (Restaurant, one employee)	6 10 0	
Curriers (tanning)	7 5 0	
Dairy Hands, adult female	3 5 4	
Dairy Hands, junior	1 15 0 to £4 0 0	
Dairy Shed Hands	4 18 0	
Drivers, 1 horse van	6 4 0	

APPENDIX I—*contd.*

Drivers, 25 cwt. motor vehicle	6	14	0	
Engine Drivers, factory (1st class)	5	13	0	
Fitters, electrical	8	7	0	
Fitters, metal trades	8	7	0	
Flax Scutchers	6	2	0	
Flax Workers (others)	5	15	0	
Fruit packers, citrus	5	7	0	
Fruit pickers, male	4	13	0	to £4 17 0
Fruit pickers, female	3	1	8	to £3 4 8
Fruit pruners	5	7	0	
Furnacemen	7	18	6	
Gardeners	5	12	10	
General Farm Hands (dairy)	5	3	0	
Grocers' Assistant, adult ..	5	15	0	
Hairdressers, men's	7	0	0	
Hairdressers, female	5	2	6	
Harvest workers, under 18 years	4	4	0	(56 hr. wk.)
Harvest workers, 20 to 21 ..	5	16	8	(56 hr. wk.)
Haystack Builders & Thatchers	8	8	0	(56 hr. wk.)
Header and Binder Drivers, wheat	7	9	4	(56 hr. wk.)
Head Drivers (rice)	1	0	0	per day
Machinists (1st class) metal trades	8	7	0	
Machinists, textile (w. & w.), male	6	5	0	
Machinists, textile (w. & w.), female	4	6	0	
Market Gardeners	5	9	0	
Milkers and Carters	5	14	6	
Motor body makers (1st class)	6	8	0	
Pattern makers, metal trades	9	0	0	
Plasterers	8	10	9	
Plumbers	8	10	0	
Printers, machine compositors	7	0	0	
Process worker, metal trades	6	16	0	
Shearer's cooks		8	9	(per hour)
Signwriters	8	10	0	

APPENDIX I—*contd.*

Slaters and Tilers	..	..	8	10	0
Slaughtermen	..	..	6	14	0
Spinners, woollen and worsteds,					
male	..	..	7	0	0
Spinners, woollen and worsteds,					
female	..	..	3	15	0
Tractor Drivers	..	..	5	18	0
Telephonists, male	..	from	5	19	0
Telephonists, female	..		3	18	0
Typists, stenographers, male					
from			5	19	0
Typists, stenographers, female			3	19	6
Weavers, woollen and worsteds,					
male	..	..	6	10	0
Weavers, woollen and worsteds,					
female	..	..	4	5	0
Wheat farm hands	..	..	6	10	8 (56 hr. wk.)
Wool Pressers	..	from	8	4	0 with rations.
Woolshed Hands	..	from	6	4	0

* *Average rates for all States as far as figures are available. A forty-hour week prevails throughout Australia in all *except rural* industries.*

APPENDIX II

THE following figures are intended as a rough guide to food prices in Australia. They are based on the prices ruling in the stores of Sydney or Melbourne. In other State Capitals prices are a little lower; but in country towns and districts costs tend to be slightly higher. Fluctuations will occur, both seasonal and with the rise or fall of prices, wages and taxation generally. Items marked (I) are especially subject to seasonal fluctuations; and those marked (II) refer to the more economical cuts of beef and mutton for family roasts and stews. There has been a system of rationing of tea, butter and meat. The tendency has been a rise in prices concomitant with increases in wages.

APPENDIX II—*contd.*

Item	Sydney				Melbourne			
	s. d.				s. d.			
Bread				11				11
Flour				8½	from			6½
Oatmeal				4				4
Cornflour				10				10
Eggs (1)				2 0			2	3
Milk				7½				7
Sugar				4				4
Jam				1 3			1	3
Treacle				7				7
Butter				1 8			1	8½
Tea				2 9			2	9
Coffee				3 4			3	6
Raisins				11½			1	0
Currants				10				11
Beef (11)				1 0			1	1
Mutton (11)				10			1	0
Bacon				1 10			1	10
Oranges (1)				3				3
Apples				10			1	0
Bananas				8				8½
Potatoes				1½				1½
Onions				4				2½
Pumpkin				4				4
Parsnips				6				3
Carrots				6				4
Peas (1)				7				8
Spinach				1 0				6

APPENDIX III

THESE prices for men's, women's and children's clothes refer to the kind and quality of garments usually worn by working people. They are subject to the same fluctuations as food and wages. The quotations are in Australian pounds. The tendency has been a rise in prices concomitant with the increases in wages.

APPENDIX III—*contd.*

Clothing for Men

Item	Sydney			Melbourne		
	£	s.	d.	£	s.	d.
Suit, ready made worsted two piece	6	15	0	5	16	0
Trousers, working, cotton ..		19	3		14	9
Overcoat, tweed, ready-made	5	0	0	5	0	0
Hat, fur felt	1	0	0	1	2	6
Shirt, fashion		17	6		18	6
Shirt, working, drill ..		10	0		10	6
Singlet, woollen		12	6		12	6
Singlet, cotton, athletic ..		2	9		3	3
Underpants, woollen ..		14	6		10	6
Socks, all wool		3	9		2	11
Braces		4	0		3	9
Handkerchief, cotton ..		1	4		1	6
Pyjamas, winceyette ..		17	6		16	9
Pullover, all wool		19	0		19	6
Shoes, best	1	15	0	1	10	0
Boots, working		19	7		1	0
			4			

Clothing for Women

Item	Sydney			Melbourne		
	£	s.	d.	£	s.	d.
Costume, ready made tweed	4	4	0	4	12	6
Skirt, ready made tweed ..	1	6	0	1	6	0
Hat, fur felt	1	9	11	1	5	6
Hat, straw	1	0	0	1	11	6
Frock, ready-made, cotton ..	1	6	0	1	5	6
Frock, ready-made, art silk ..	1	19	11	1	5	0
Brassiere, cotton brocade ..		11	0		9	2
Undervest, wool and rayon		3	7½		4	3
Undervest, rayon		5	2		5	2
Bloomers, rayon		5	8		5	10
Princess slip, rayon		9	4		9	0
Stockings, rayon		7	7		6	4
Stockings, lisle		6	3		6	5

APPENDIX III—*contd.*

Gloves, fabric	..	..	6	3	8	0
Gloves, nappa	..	..	19	3	19	11
Nightdress, rayon	..	..	15	10	13	11
Pyjamas, winceyette		..	15	6	17	0		
Apron, cotton	..	..	5	9	3	11
Cardigan, all wool	1	2	1	7	6	
Shoes, best	1	10	0	1	7	6
Shoes, ordinary	1	3	0	18	11	

APPENDIX IV

THESE prices are especially subject to fluctuations between the different capital cities and, even more so, between the principal towns and the remote country districts. They may change rapidly with the rise or fall in prices generally. Quotations are in Australian pounds.

Household Drapery

Item	Sydney			Melbourne		
	£	s.	d.	£	s.	d.
Blankets, D.B. pair	2	19	0	3	1	11
Blankets, S.B. pair	2	4	4	2	4	4
Quilt D.B. Marcella	4	3	0	2	6	6
Sheets, D.B. pair	1	6	11	1	19	10
Sheets, S.B. pair	15	6		1	5	10
Pillow slip	2	11		2	11	
Towel (hand)	4	2		4	0	
Tablecloth	1	6	5	2	19	0
Tea Towel (per yard)	4	4		4	11	

APPENDIX V

Income Tax, Including Social Service contributions.

Income from "personal exertion," which includes "wage and business incomes," is taxed at lower rates than income from property (rents, dividends, interest, etc.). It is collected by weekly deductions on the pay-as-you-earn principle. The total assessment for income now includes the old "Social Services Contributions." The following table shows the approximate rates of assessment for Earned Incomes.

APPENDIX V—*contd.*

Income per annum	Taxpayer without dependants	Taxpayer with depend-ent wife	Taxpayer with wife and child	Taxpayer with wife and two children
£	£ s. d.	£ s. d.	£ s. d.	£ s. d.
200 ...	10 17 0	—	—	—
300 ...	28 1 0	11 5 0	2 5 0	—
400 ...	48 12 0	30 7 0	18 0 0	12 0 0
500 ...	71 17 0	50 6 0	37 10 0	30 0 0
600 ...	97 16 0	73 7 0	57 1 0	48 18 0
800 ...	157 12 0	128 1 0	108 7 0	98 10 0
1,000 ...	228 2 0	193 18 0	171 1 0	159 13 0
2,000 ...	682 6 0	636 6 0	603 4 0	588 4 0

The above figures show “taxable incomes,” and differ from “total *earned* incomes” by the exemptions allowed, which include the concessional allowances for each additional dependant and for items such as medical, dental and hospital expenses up to £50, life insurance and superannuation premiums to £100, and rates and taxes on property that yields no income. The old system of separate Commonwealth and State income taxes was replaced in 1942 by a single uniform tax levied by the Commonwealth. In 1946 this uniform income tax became permanent. A similar arrangement exists for the entertainment tax.

There has been a general tendency not only to impose less taxation on lower incomes, but also on incomes derived from property. For example the rate for the latter dropped from the commencing figure of three shillings and elevenpence in the £A for the financial year 1946-7 to the lowest property income rate for the year 1947-8 of two shillings and elevenpence in the £A. This increased to the maximum rate thirteen shillings and sixpence in the £A for property incomes *on* excess of £A5,000. There have been frequent changes in the rates of taxation and it is impossible to do more than indicate here the burden of taxation and the tendency to decrease it.

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